

## **CHAPTER 4**

### **POINT AND NONPOINT SOURCE CHARACTERIZATION OF THE LOWER ELK RIVER WATERSHED**

#### **4.1. Background.**

#### **4.2. Characterization of HUC-10 Subwatersheds**

##### **4.2.A. 0603000401 (Elk River)**

##### **4.2.B. 0603000402 (Richland Creek)**

##### **4.2.C. 0603000403 (Big Creek)**

##### **4.2.D. 0603000404 (Sugar Creek)**

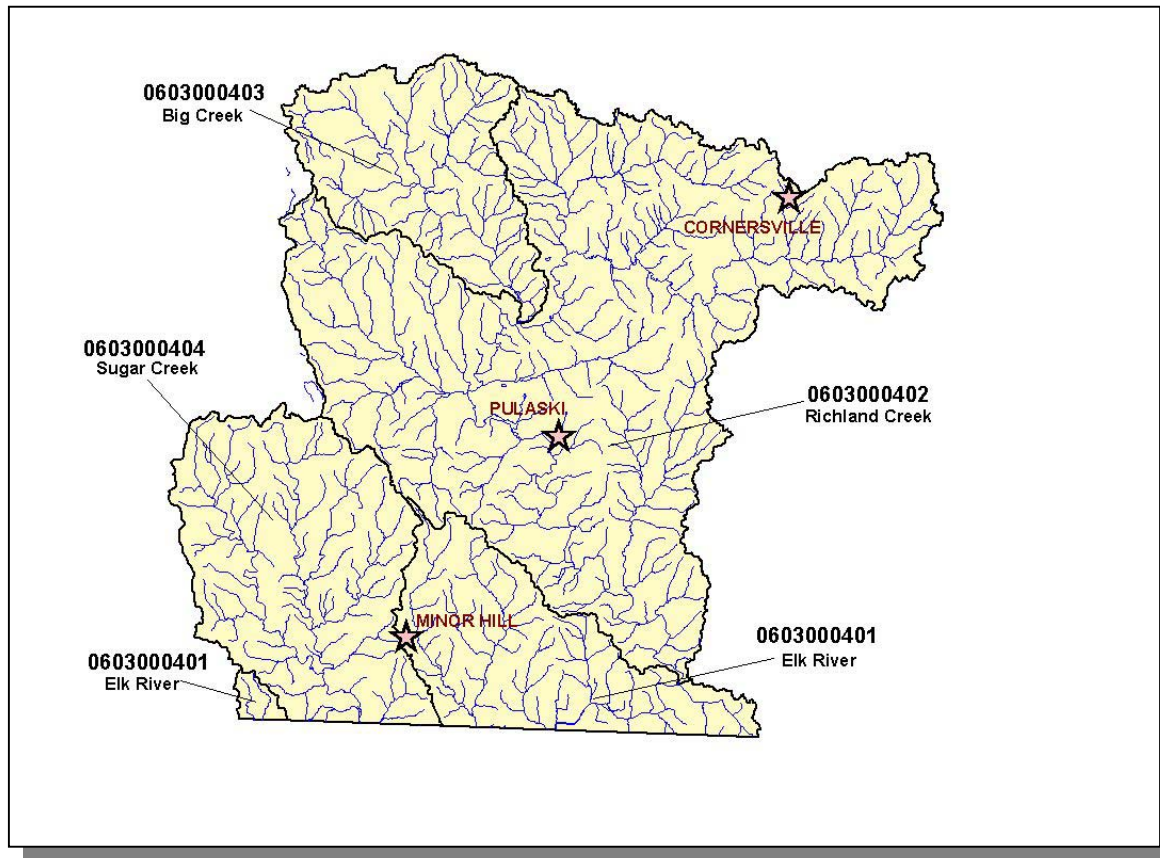
**4.1. BACKGROUND.** This chapter is organized by HUC-10 subwatershed, and the description of each subwatershed is divided into four parts:

- i. General description of the subwatershed
- ii. Description of point source contributions
- ii.a. Description of facilities discharging to water bodies listed on the 1998 303(d) list
- iii. Description of nonpoint source contributions

The Lower Elk River Watershed (HUC 06030004) has been delineated into four HUC 10-digit subwatersheds.

Information for this chapter was obtained from databases maintained by the Division of Water Pollution Control or provided in the WCS (Watershed Characterization System) data set. The WCS used was version 1.1 beta (developed by Tetra Tech, Inc for EPA Region 4) released in 2000.

WCS integrates with ArcView® v3.2 and Spatial Analyst® v1.1 to analyze user-delineated (sub)watersheds based on hydrologically connected water bodies. Reports are generated by integrating WCS with Microsoft® Word. Land Use/Land Cover information from 1992 MRLC (Multi-Resolution Land Cover) data are calculated based on the proportion of county-based land use/land cover in user-delineated (sub)watersheds. Nonpoint source data in WCS are based on agricultural census data collected 1992–1998; nonpoint source data were reviewed by Tennessee NRCS staff.



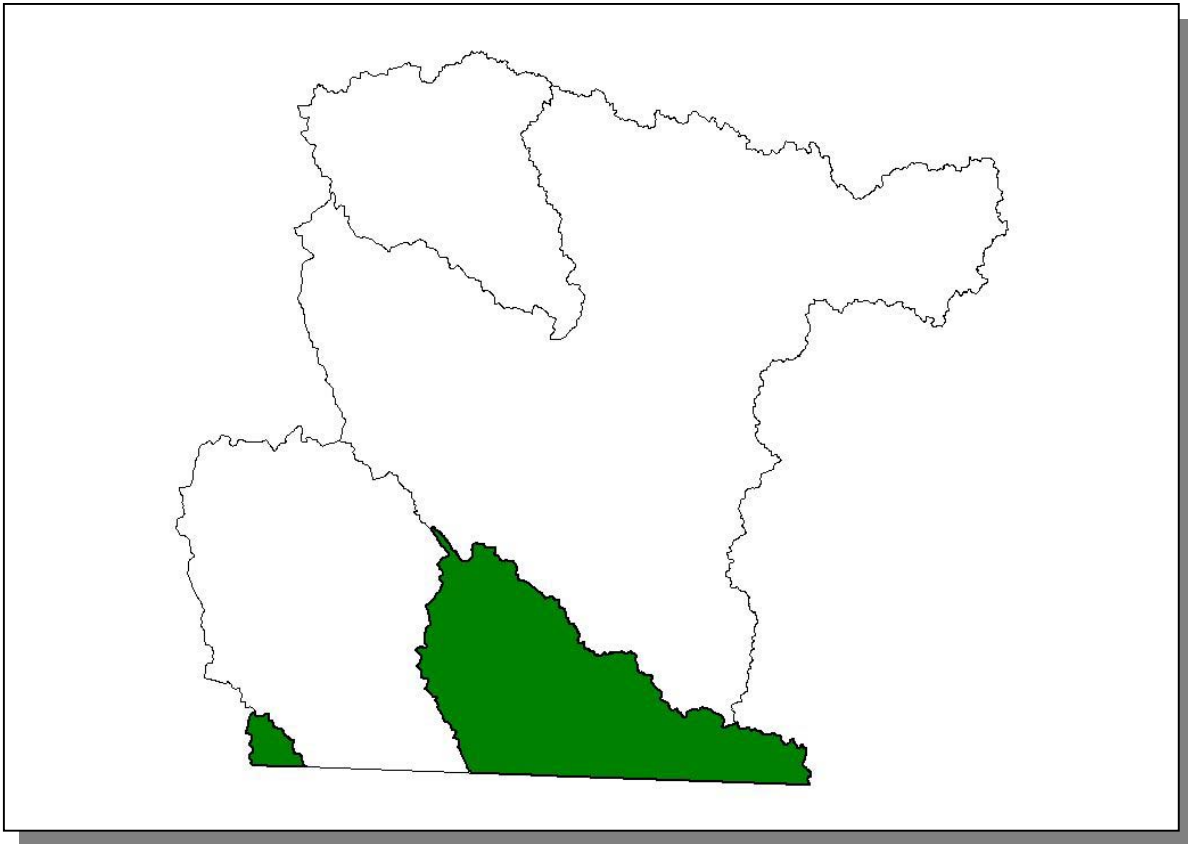
**Figure 4-1. The Tennessee Portion of the Lower Elk River Watershed is Composed of Four USGS-Delineated Subwatersheds (10-Digit Subwatersheds). Locations of Cornersville, Minor Hill, and Pulaski are shown for reference.**

**4.2. CHARACTERIZATION OF HUC-10 SUBWATERSHEDS.** The Watershed Characterization System (WCS) software and data sets provided by EPA Region IV were used to characterize each subwatershed in the Tennessee portion of the Lower Elk River Watershed.

HUC-10	HUC-12
0603000401	060300040101 (Elk River)
	060300040102 (Shoal Creek)
	060300040104 (Anderson Creek)
0603000402	060300040201 (Richland Creek)
	060300040202 (Richland Creek)
	060300040203 (Robertson Fork)
	060300040204 (Richland Creek)
	060300040205 (Weakley Creek)
	060300040206 (Richland Creek)
	060300040207 (Buchanan Creek)
	060300040208 (Richland Creek)
0603000403	060300040301 (Factory Creek)
	060300040302 (Yokely Creek)
	060300040303 (Big Creek)
0603000404	060300040401 (East Fork Sugar Creek)
	060300040402 (West Fork Sugar Creek)
	060300040403 (Sugar Creek)

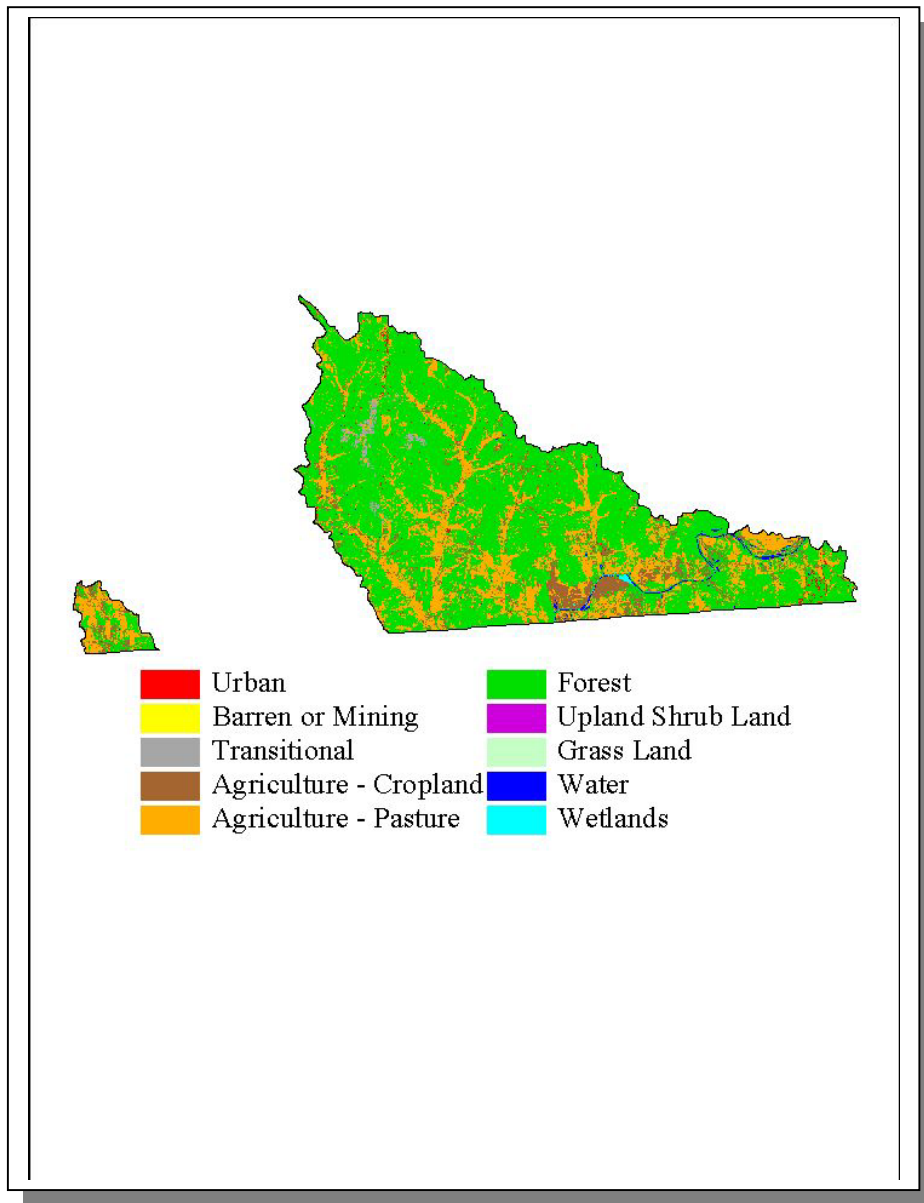
**Table 4-1. HUC-12 Drainage Areas are Nested Within HUC-10 Drainages.** NRCS worked with USGS to delineate the HUC-10 and HUC-12 drainage boundaries.

**4.2.A. 0603000401.**



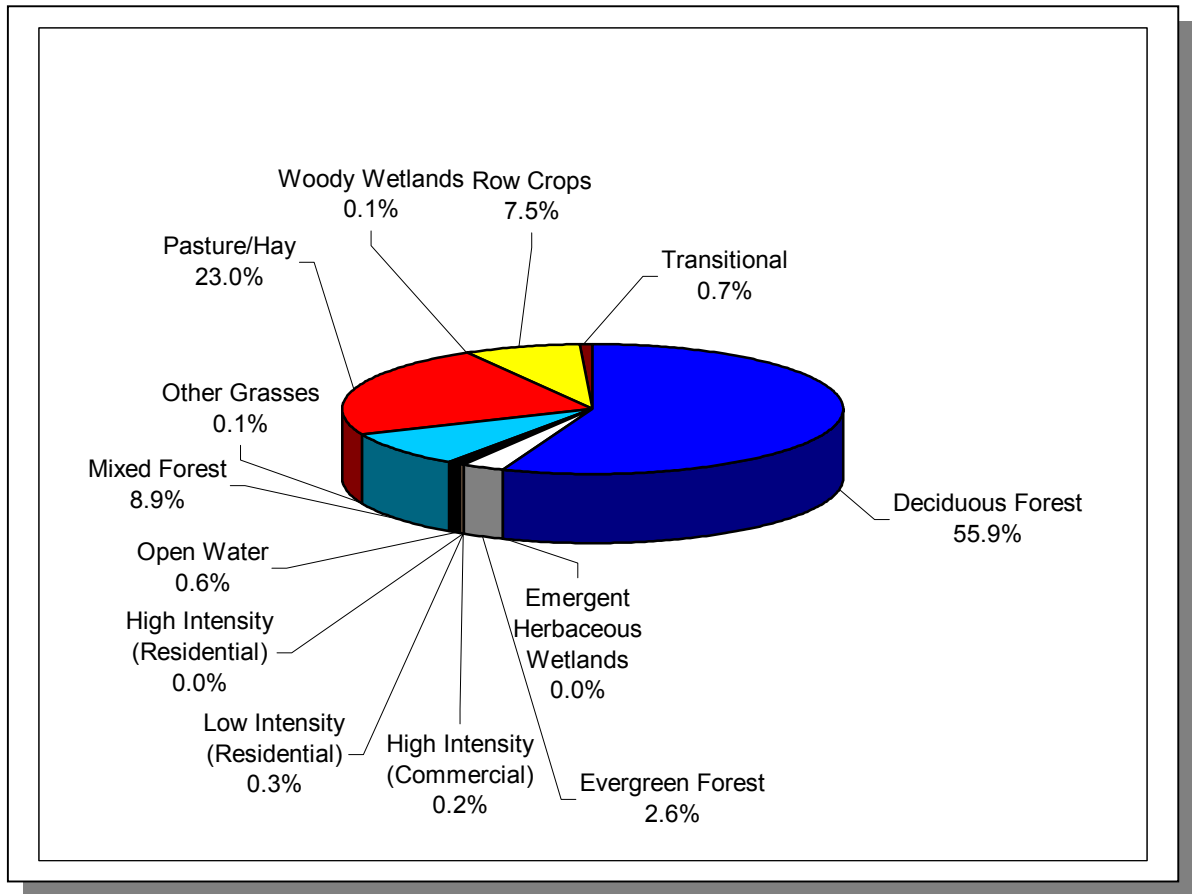
**Figure 4-2. Location of Subwatershed 0603000401.** All Lower Elk HUC-10 subwatershed boundaries in Tennessee are shown for reference.

**4.2.A.i. General Description.**



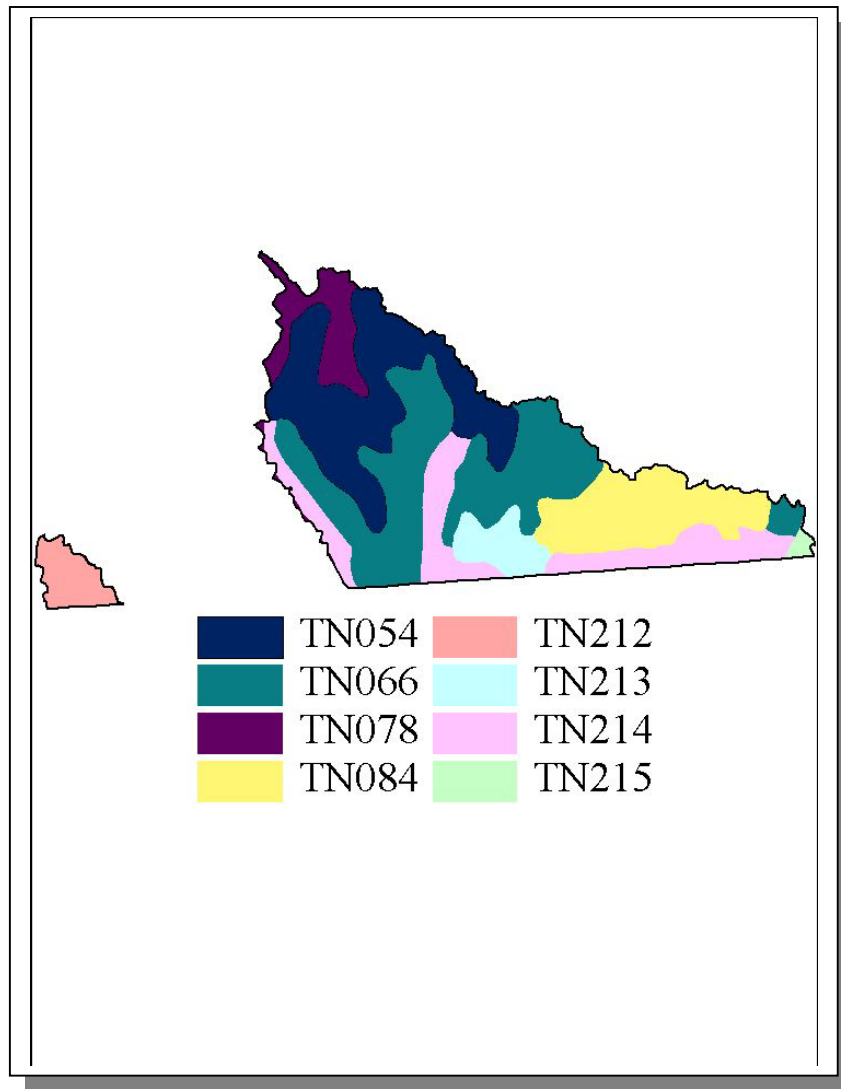
**Figure 4-3. Illustration of Land Use Distribution in Subwatershed 0603000401.**

**DRAFT**



**Figure 4-4. Land Use Distribution in Subwatershed 0603000401.** More information is provided in Lower Elk-Appendix IV.

**DRAFT**



**Figure 4-5. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 0603000401.**

STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN054	0.00	C	3.04	4.84	Loam	0.32
TN066	0.00	B	2.62	4.75	Loam	0.28
TN078	5.00	B	1.73	4.96	Silty Loam	0.39
TN084	0.00	C	1.80	4.99	Silty Loam	0.28
TN212	4.00	B	1.95	5.04	Silty Loam	0.38
TN213	9.00	C	1.89	5.30	Loam	0.35
TN214	0.00	B	2.52	4.86	Loam	0.32
TN215	9.00	C	1.57	5.02	Silty Loam	0.39

**Table 4-2. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 0603000401.** More details are provided in Lower Elk-Appendix IV.

**DRAFT**

County	COUNTY POPULATION		Portion of Watershed (%)	ESTIMATED POPULATION IN WATERSHED		PERCENT CHANGE
	1990	1997 Est.		1990	1997	
Giles	25,741	28,515	12.84	3,306	3,662	10.8
Lawrence	35,303	39,095	0.4	143	158	10.5
<b>Totals</b>	<b>61,044</b>	<b>67,610</b>		<b>3,449</b>	<b>3,820</b>	<b>10.8</b>

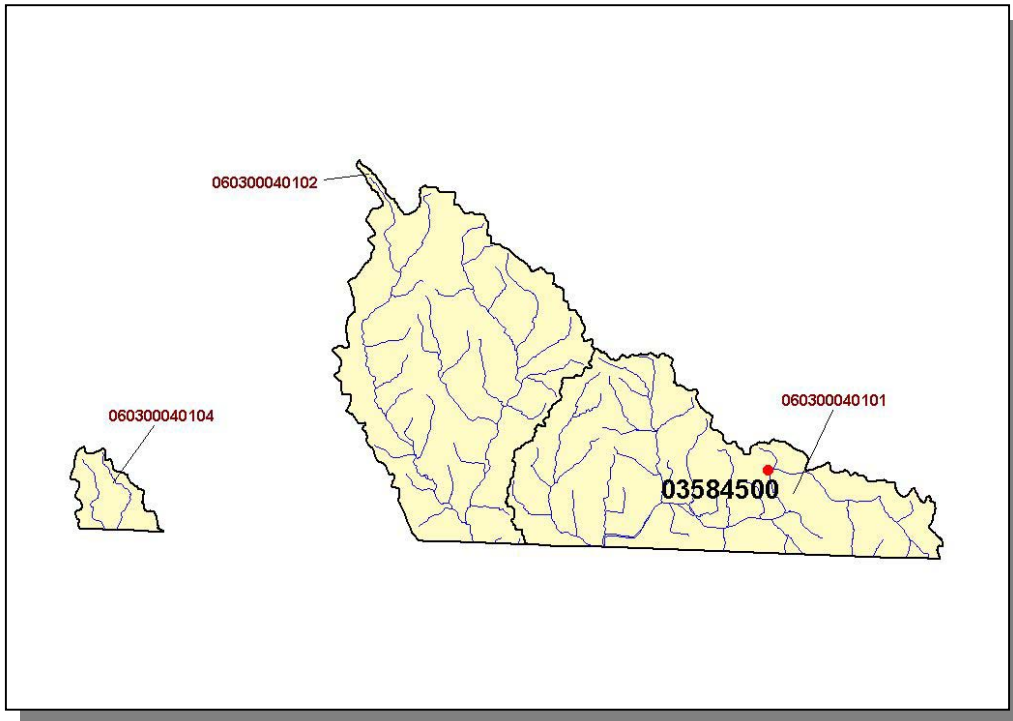
*Table 4-3. Population Estimates in Subwatershed 0603000401.*

Populated Place	County	Population	NUMBER OF HOUSING UNITS			
			Total	Public Sewer	Septic Tank	Other
Ardmore	Giles	828	342	192	150	0
Minor Hill	Giles	351	186	2	182	2
<b>Total</b>		<b>1,179</b>	<b>528</b>	<b>194</b>	<b>332</b>	<b>2</b>

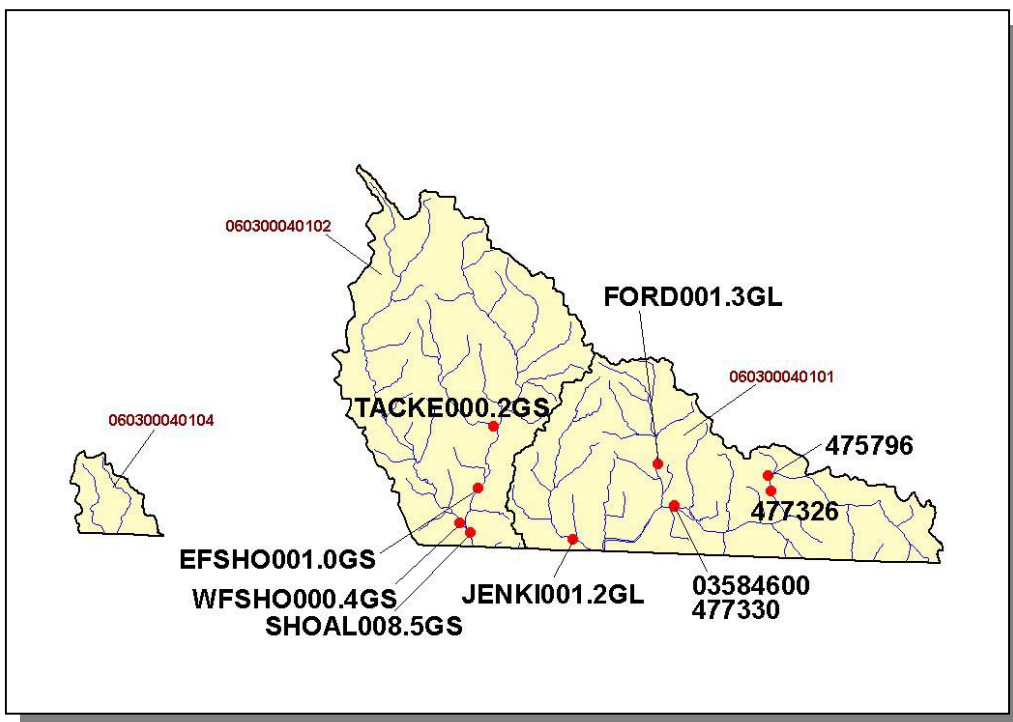
*Table 4-4. Housing and Sewage Disposal Practices of Select Communities in Subwatershed 0603000401.*



**DRAFT**

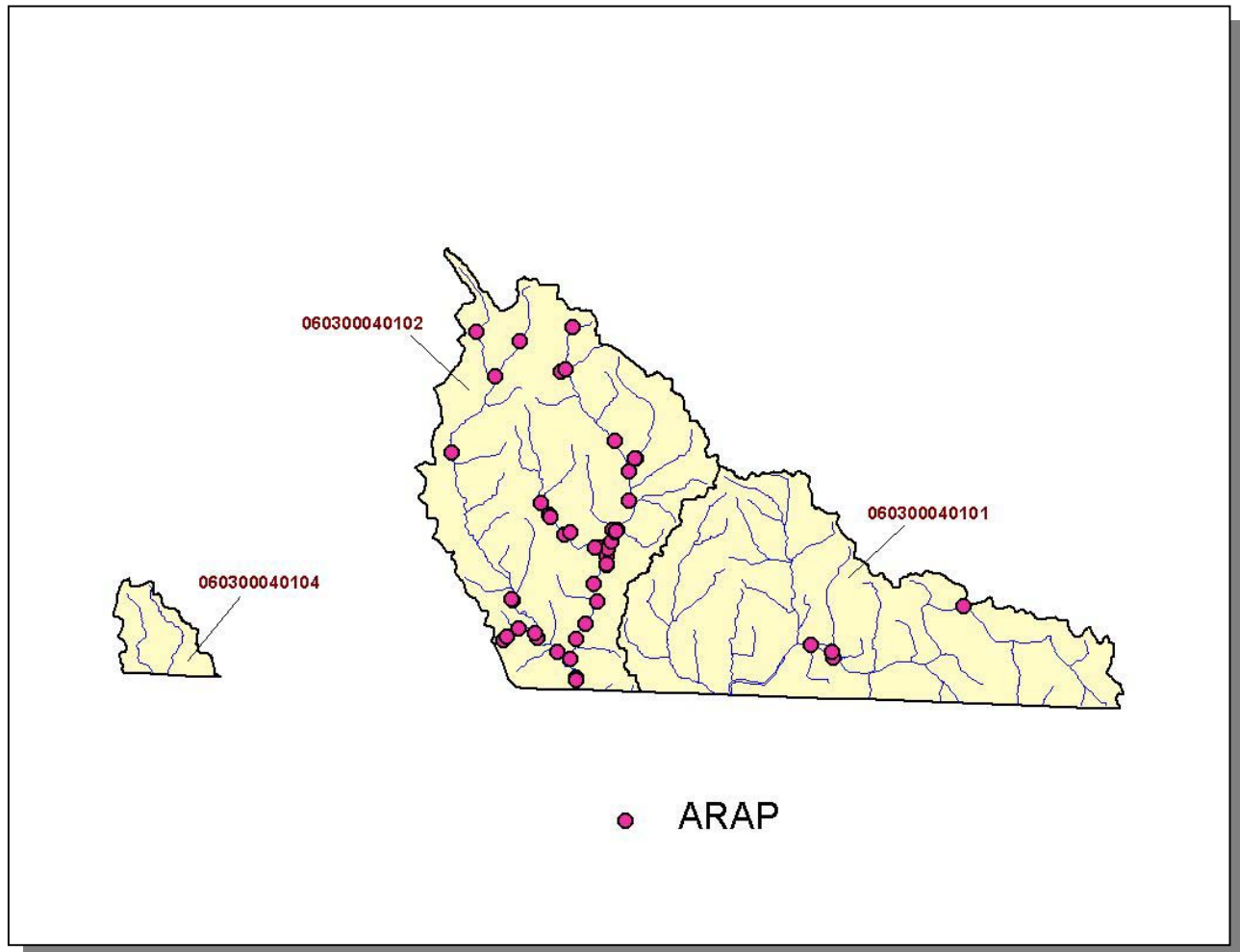


**Figure 4-6. Location of Historical Streamflow Data Collection Sites in Subwatershed 0603000401.** Subwatershed 060300040101, 060300040102, and 060300040104 boundaries are shown for reference. More information is provided in Lower Elk-Appendix IV.

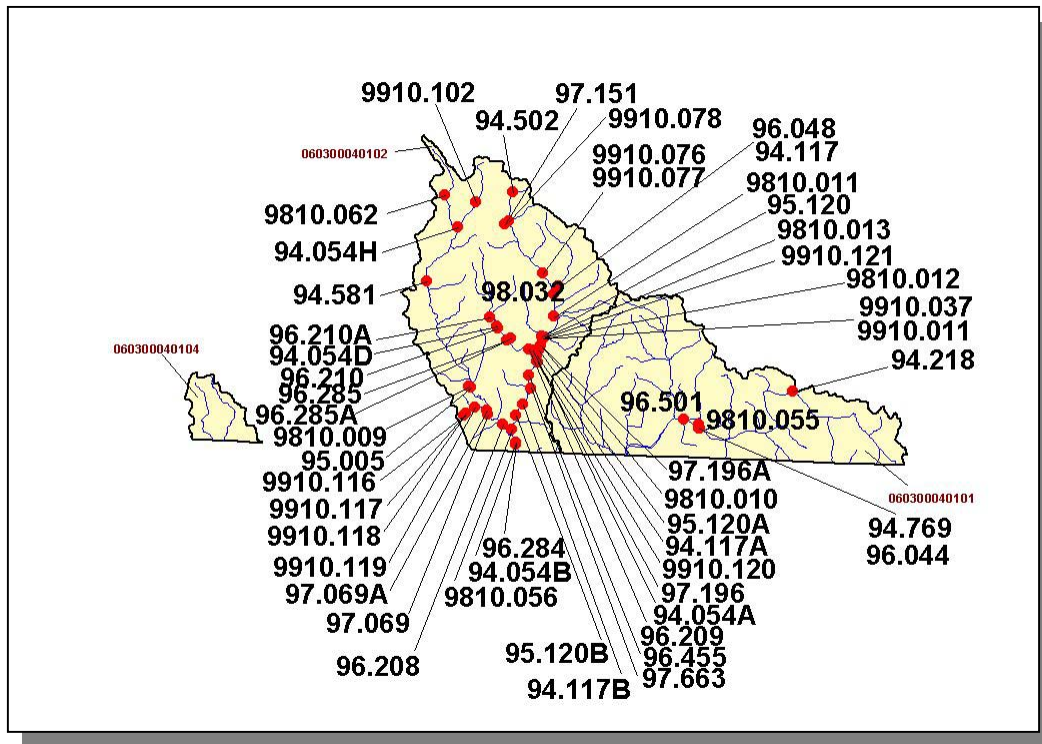


**Figure 4-7. Location of STORET Monitoring Sites in Subwatershed 0603000401.** Subwatershed 060300040101, 060300040102, and 060300040104 boundaries are shown for reference. More information is provided in Lower Elk-Appendix IV.

**4.2.A.ii** Point Source Contributions.



**Figure 4-8. Location of Active Point Source Facilities in Subwatershed 0603000401.** Subwatershed 060300040101, 060300040102, and 060300040104 boundaries are shown for reference. More information is provided in the following charts.



**Figure 4-9. Location of ARAP Sites (Individual Permits) in Subwatershed 060300040101.** Subwatershed 060300040101, 060300040102, and 060300040104 boundaries are shown for reference. More information is provided in Lower Elk-Appendix IV.

**DRAFT**

**4.2.A.iii. Nonpoint Source Contributions.**

<b>LIVESTOCK (COUNTS)</b>						
Beef Cow	Cattle	Milk Cow	Chickens	Chickens Sold	Hogs	Sheep
3,345	7,276	301	10	110,966	956	38

**Table 4-5. Summary of Livestock Count Estimates in Subwatershed 0603000401.** According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older; "Chickens Sold" are all chickens used to produce meat.

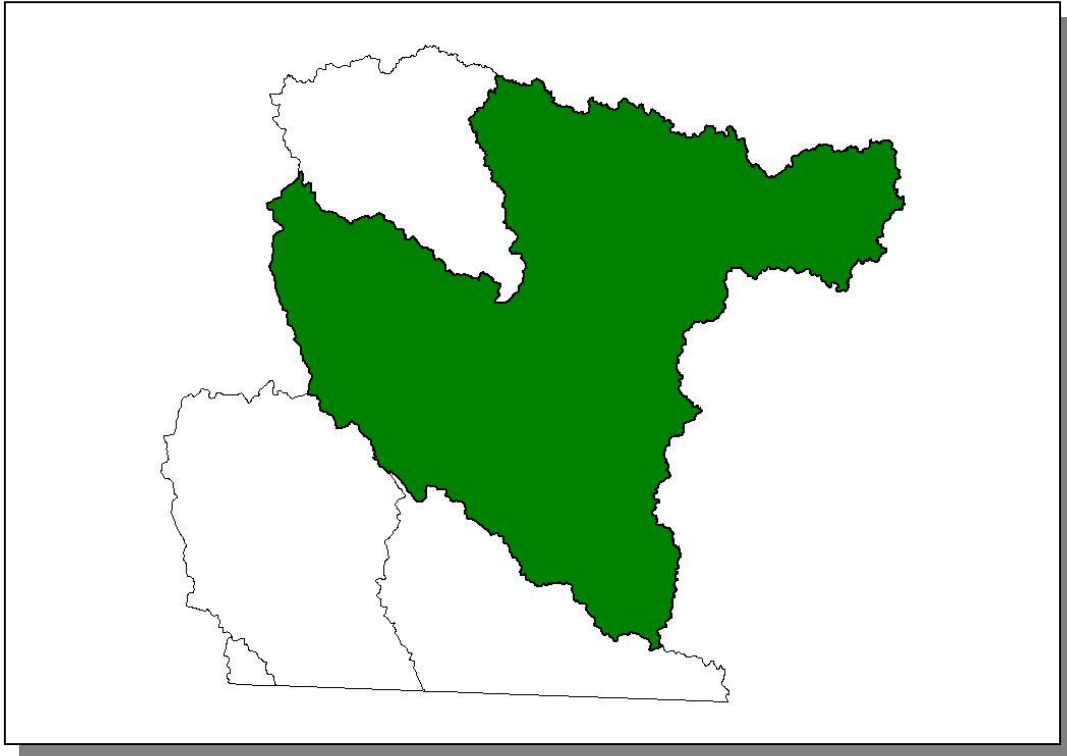
County	<b>INVENTORY</b>		<b>REMOVAL RATE</b>	
	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Giles	171.8	171.8	3.3	11.4
Lawrence	199.8	199.8	6.6	27.1
<b>Totals</b>	<b>371.6</b>	<b>371.6</b>	<b>9.9</b>	<b>38.5</b>

**Table 4-6. Forest Acreage and Annual Removal Rates (1987-1994) in Subwatershed 0603000401.**

<b>CROPS</b>	<b>TONS/ACRE/YEAR</b>
Corn (Row Crops)	4.25
Soybeans (Row Crops)	3.93
Cotton (Row Crops)	8.07
All Other Row Crops	2.70
Grass (Hayland)	0.21
Legume/Grass (Hayland)	0.12
Grass (Pastureland)	1.03
Grass, Forbs, Legumes (Mixed Pasture)	0.77
Forest Land (Grazed)	0.00
Forest Land (Not Grazed)	0.00
Wheat (Close Grown Cropland)	2.28
Barley (Close Grown Cropland)	1.08
All Other Close Grown Cropland	1.80
Other Vegetable and Truck Crops	4.29
Conservation Reserve Program Land	0.25
Summer Fallow (Other Cropland)	0.35
Other Cropland (Not Planted)	0.66
Nonagricultural Land Use	0.00
Farmsteads and Ranch Headquarters	0.32

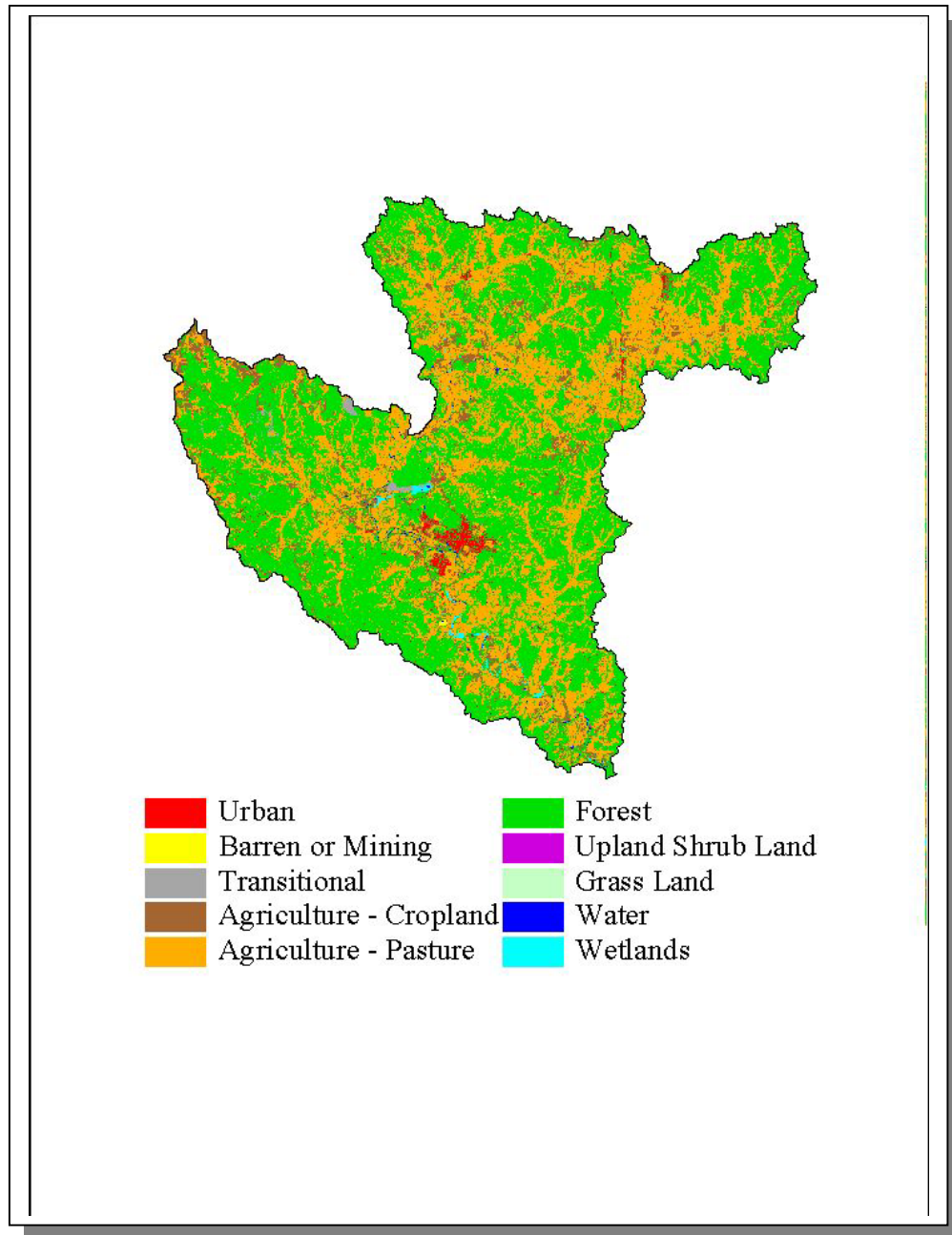
**Table 4-7. Annual Estimated Total Soil Loss in Subwatershed 0603000401.**

**4.2.B. 0603000402.**



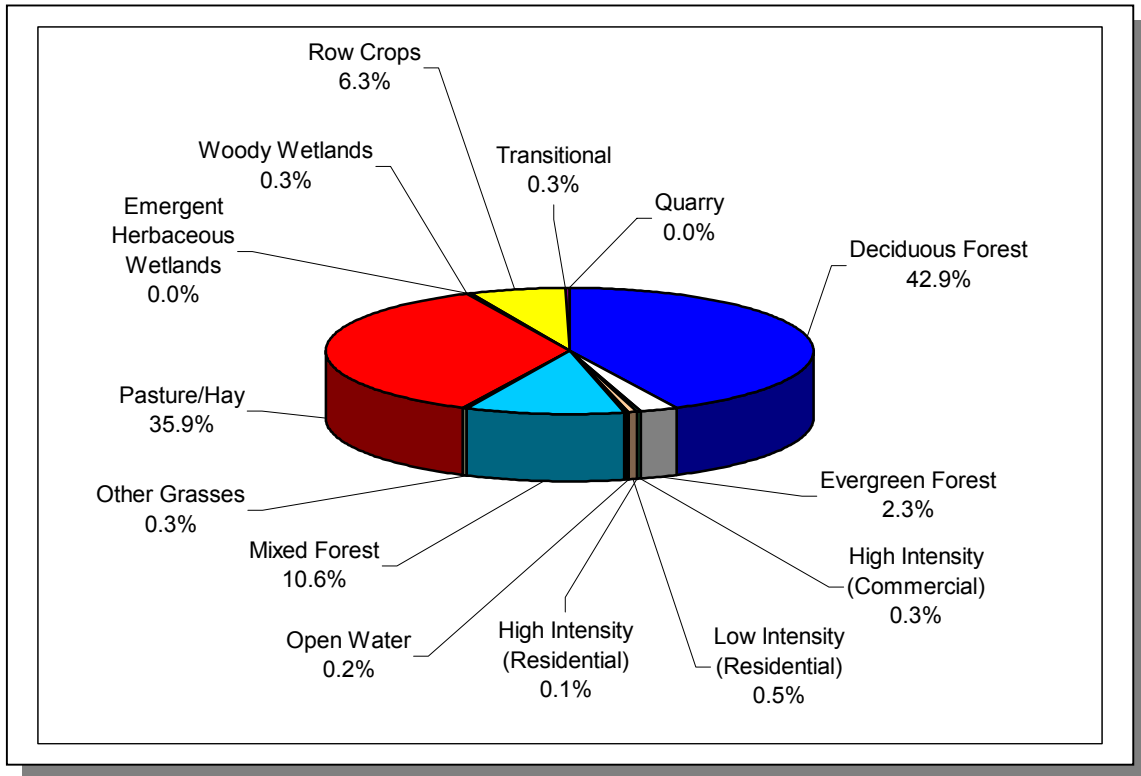
**Figure 4-10. Location of Subwatershed 0603000402.** All Lower Elk HUC-10 subwatershed boundaries are shown for reference.

**4.2.B.i.** General Description.



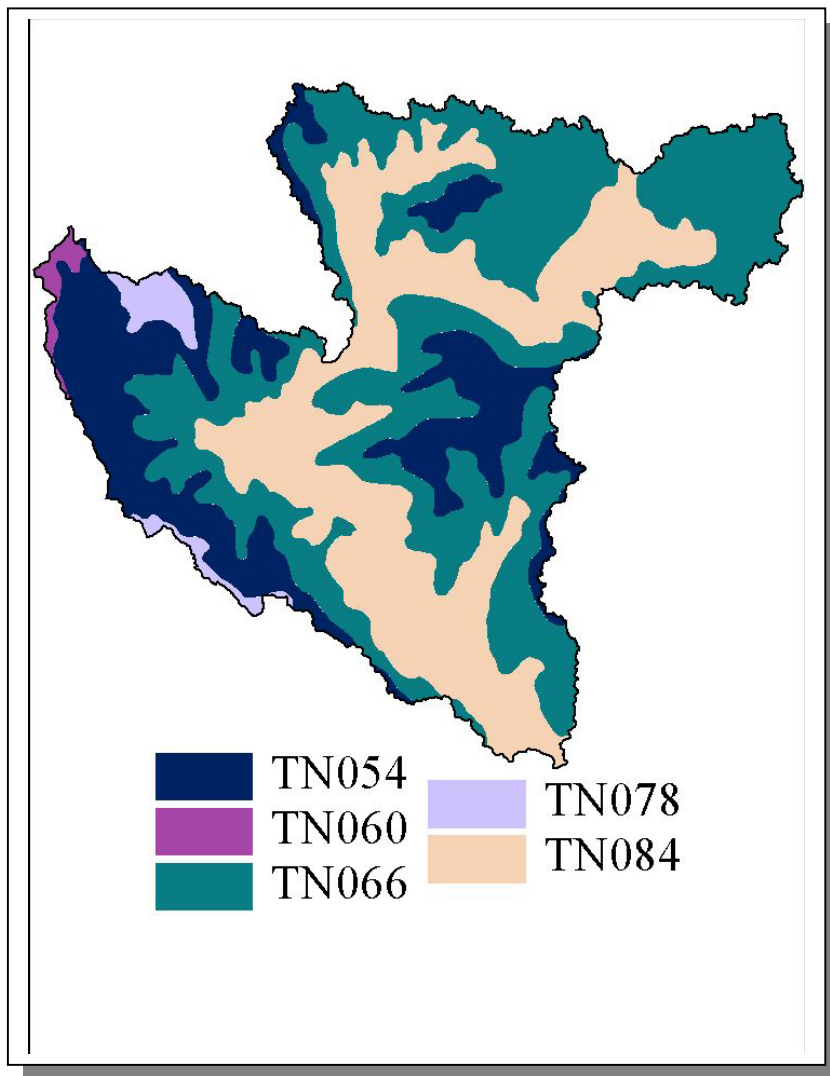
**Figure 4-11. Illustration of Land Use Distribution in Subwatershed 0603000402.**

**DRAFT**



**Figure 4-12. Land Use Distribution in Subwatershed 0603000402.** More information is provided in Lower Elk-Appendix IV.

**DRAFT**



**Figure 4-13. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 0603000402.**

STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN054	0.00	C	3.04	4.84	Loam	0.32
TN060	5.00	B	1.30	5.32	Silty Loam	0.39
TN066	0.00	B	2.62	4.75	Loam	0.28
TN078	5.00	B	1.73	4.96	Silty Loam	0.39
TN084	0.00	C	1.80	4.99	Silty Loam	0.28

**Table 4-8. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 0603000402.** More information is provided in Lower Elk-Appendix IV.



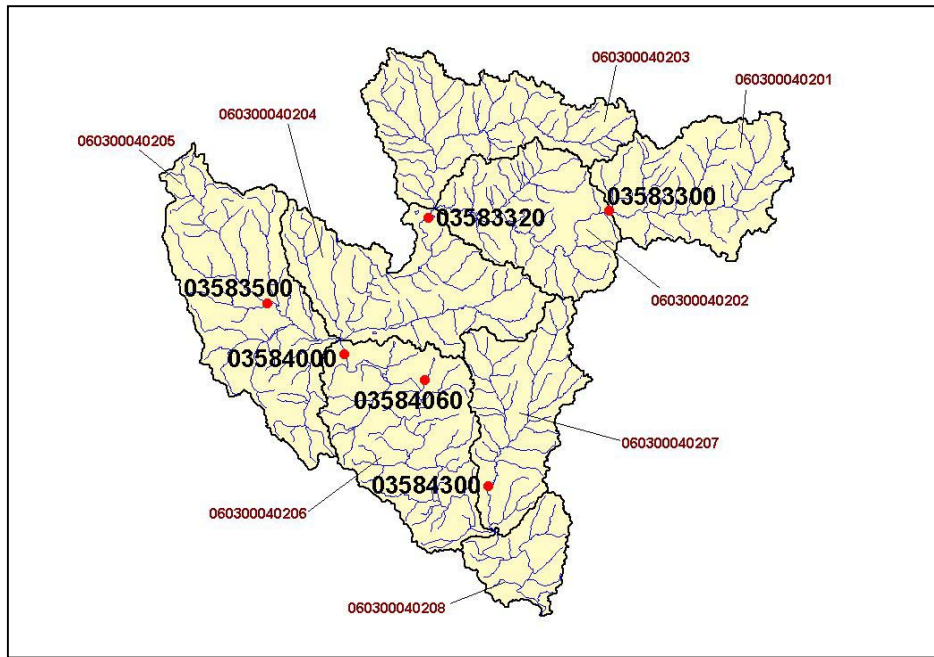
**DRAFT**

County	COUNTY POPULATION		Portion of Watershed (%)	ESTIMATED POPULATION IN WATERSHED		% CHANGE
	1990	1997 Est.		1990	1997	
Giles	25,741	28,515	52.14	13,422	14,868	10.8
Lawrence	35,303	39,095	2.99	1,057	1,171	10.8
Marshall	21,539	25,687	15.47	3,332	3,974	19.3
<b>Total</b>	<b>82,583</b>	<b>93,297</b>		<b>17,811</b>	<b>20,013</b>	<b>12.4</b>

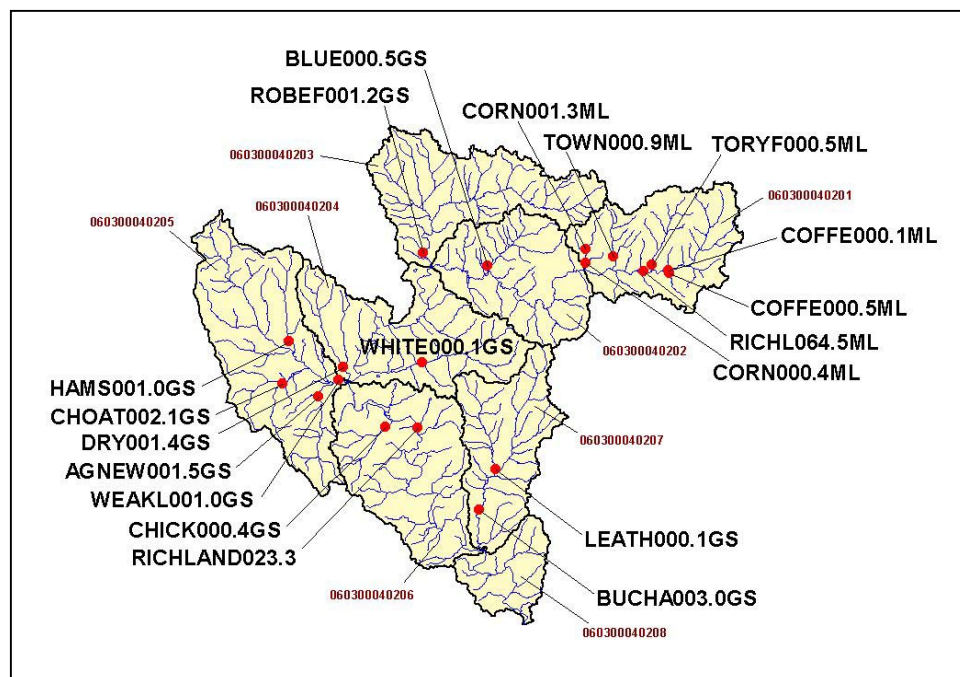
*Table 4-9. Population Estimates in Subwatershed 0603000402.*

Populated Place	County	Population	NUMBER OF HOUSING UNITS			
			Total	Public Sewer	Septic Tank	Other
Cornersville	Marshall	677	312	54	255	3
Elkton	Giles	463	184	1	183	0
Lynnville	Giles	366	167	18	145	4
Pulaski	Giles	7,895	3,545	3,283	262	0
<b>Total</b>		<b>9,401</b>	<b>4,208</b>	<b>3,356</b>	<b>845</b>	<b>7</b>

*Table 4-10. Housing and Sewage Disposal Practices of Select Communities in Subwatershed 0603000402.*

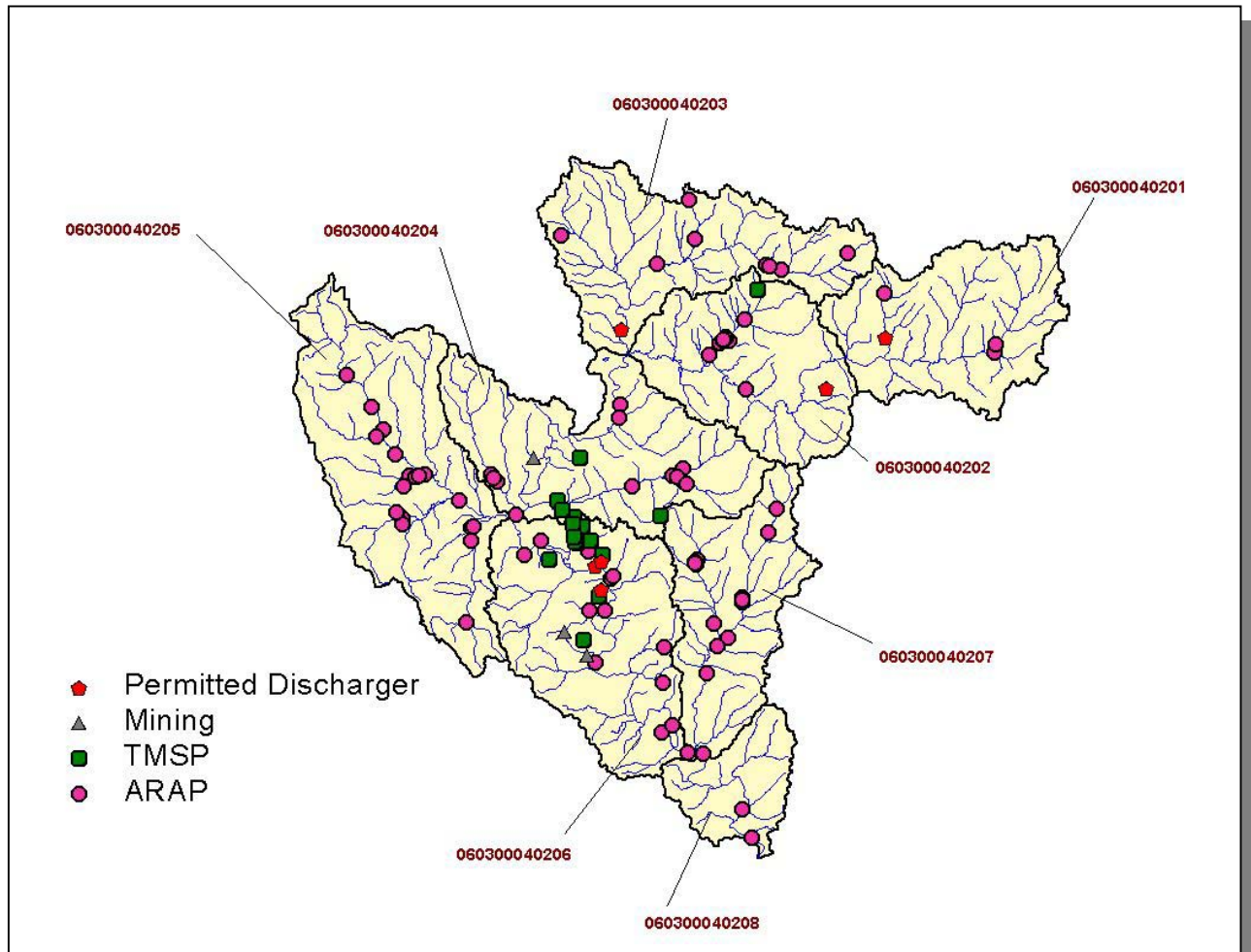


**Figure 4-14. Location of Historical Streamflow Data Collection Sites in Subwatershed 0603000402.** Subwatershed 060300040201, 060300040202, 060300040203, 060300040204, 060300040205, 060300040206, 060300040207, and 060300040208 boundaries are shown for reference. More information is provided in Lower Elk-Appendix IV.



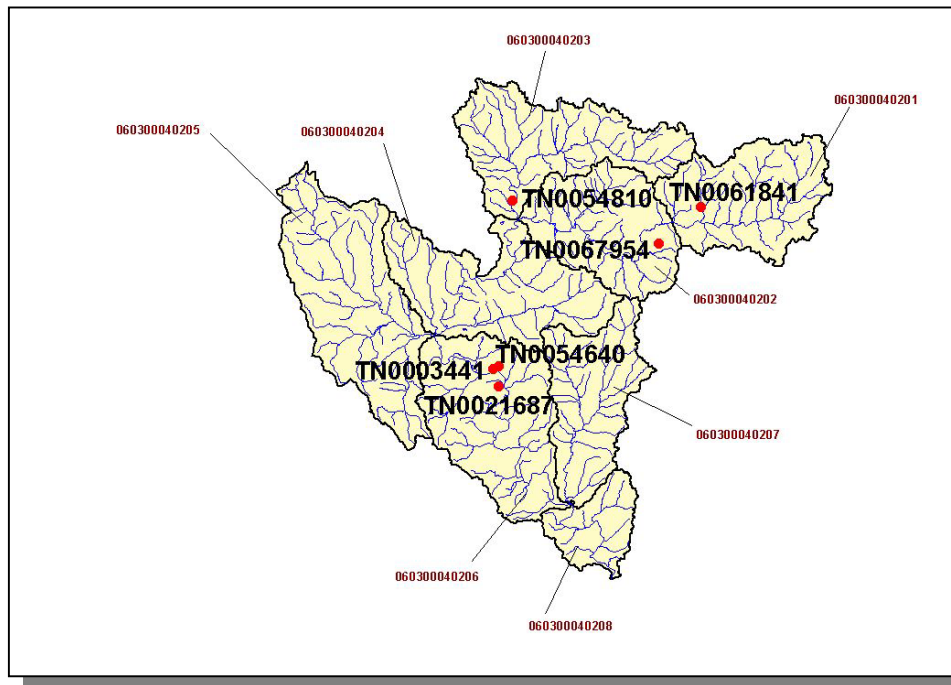
**Figure 4-15. Location of STORET Monitoring Sites in Subwatershed 0603000402.** Subwatershed 060300040201, 060300040202, 060300040203, 060300040204, 060300040205, 060300040206, 060300040207, and 060300040208 boundaries are shown for reference. More information is provided in Lower Elk-Appendix IV.

**4.2.B.ii.** Point Source Contributions.

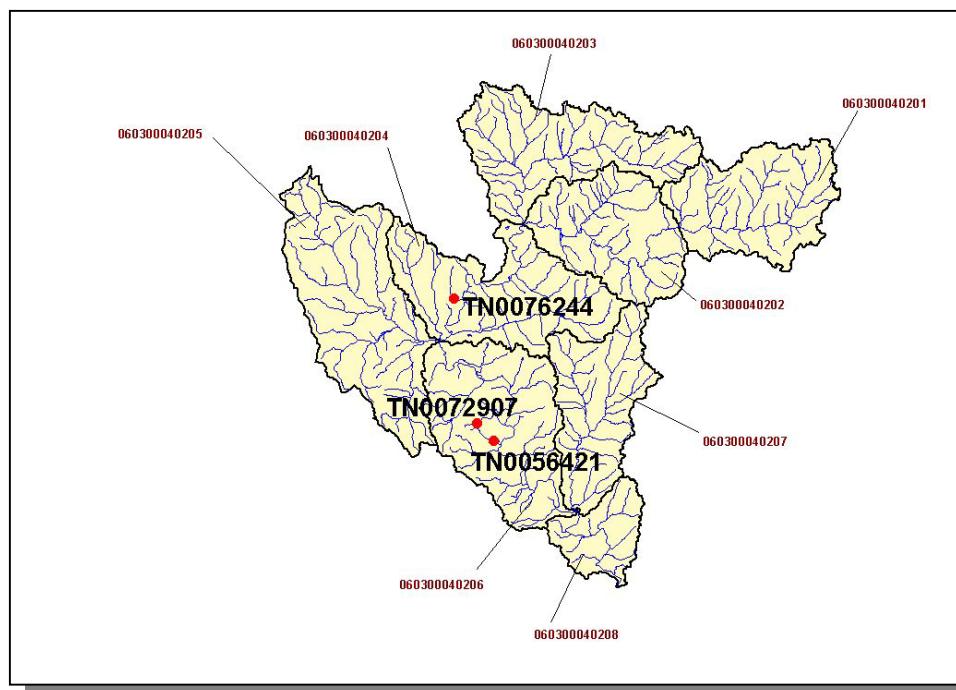


**Figure 4-16. Location of Active Point Source Facilities in Subwatershed 0603000402.** Subwatershed 060300040201, 060300040202, 060300040203, 060300040204, 060300040205, 060300040206, 060300040207, and 060300040208 boundaries are shown for reference. More information is provided in the following charts.

**DRAFT**



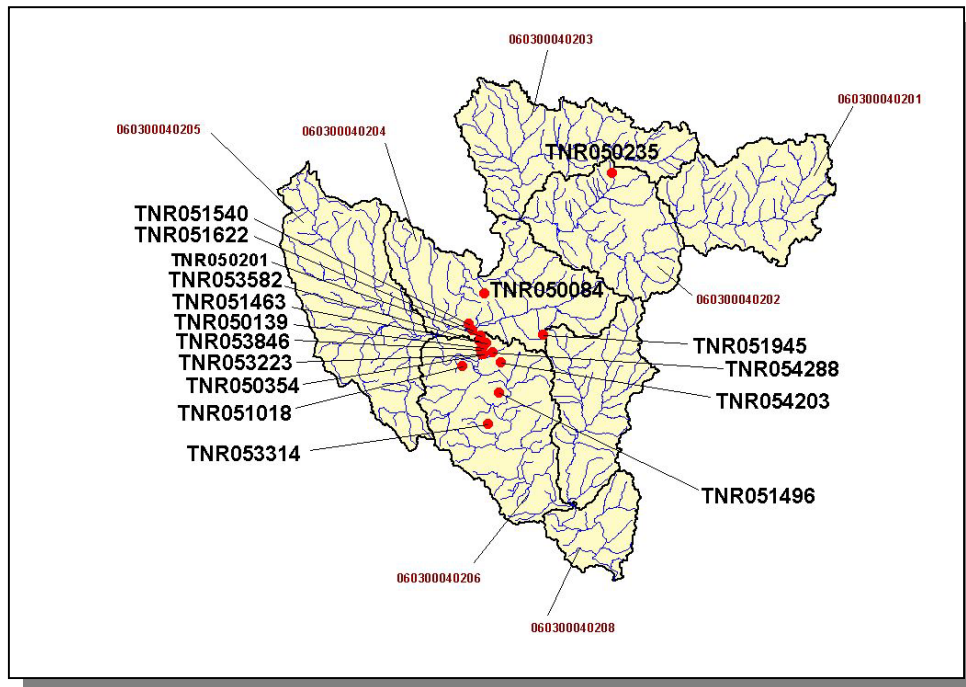
**Figure 4-17. Location of Active Point Source Facilities (Individual Permits) in Subwatershed 0603000402.** Subwatershed 060300040201, 060300040202, 060300040203, 060300040204, 060300040205, 060300040206, 060300040207, and 060300040208 boundaries are shown for reference. More information, including the names of facilities, is provided in Lower Elk-Appendix IV.



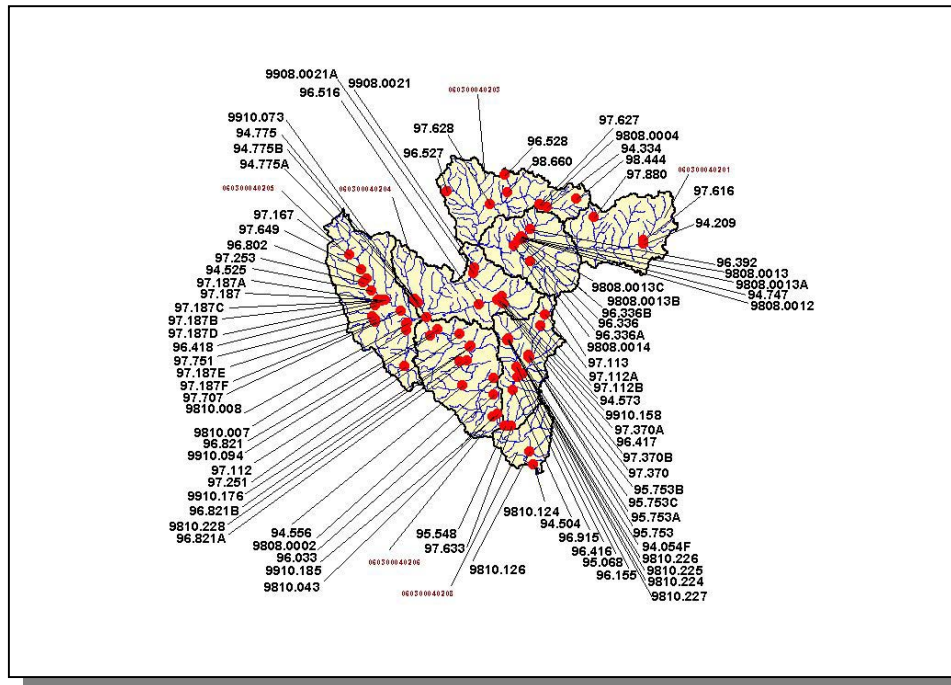
**Figure 4-18. Location of Active Mining Sites in Subwatershed 0603000402.** Subwatershed 060300040201, 060300040202, 060300040203, 060300040204, 060300040205, 060300040206, 060300040207, and 060300040208 boundaries are shown for reference. More information, including the names of facilities, is provided in Lower Elk-Appendix IV.



**DRAFT**



**Figure 4-19. Location of TMSP Facilities in Subwatershed 0603000402.** Subwatershed 060300040201, 060300040202, 060300040203, 060300040204, 060300040205, 060300040206, 060300040207, and 060300040208 boundaries are shown for reference. More information, including the names of facilities, is provided in Lower Elk-Appendix IV.

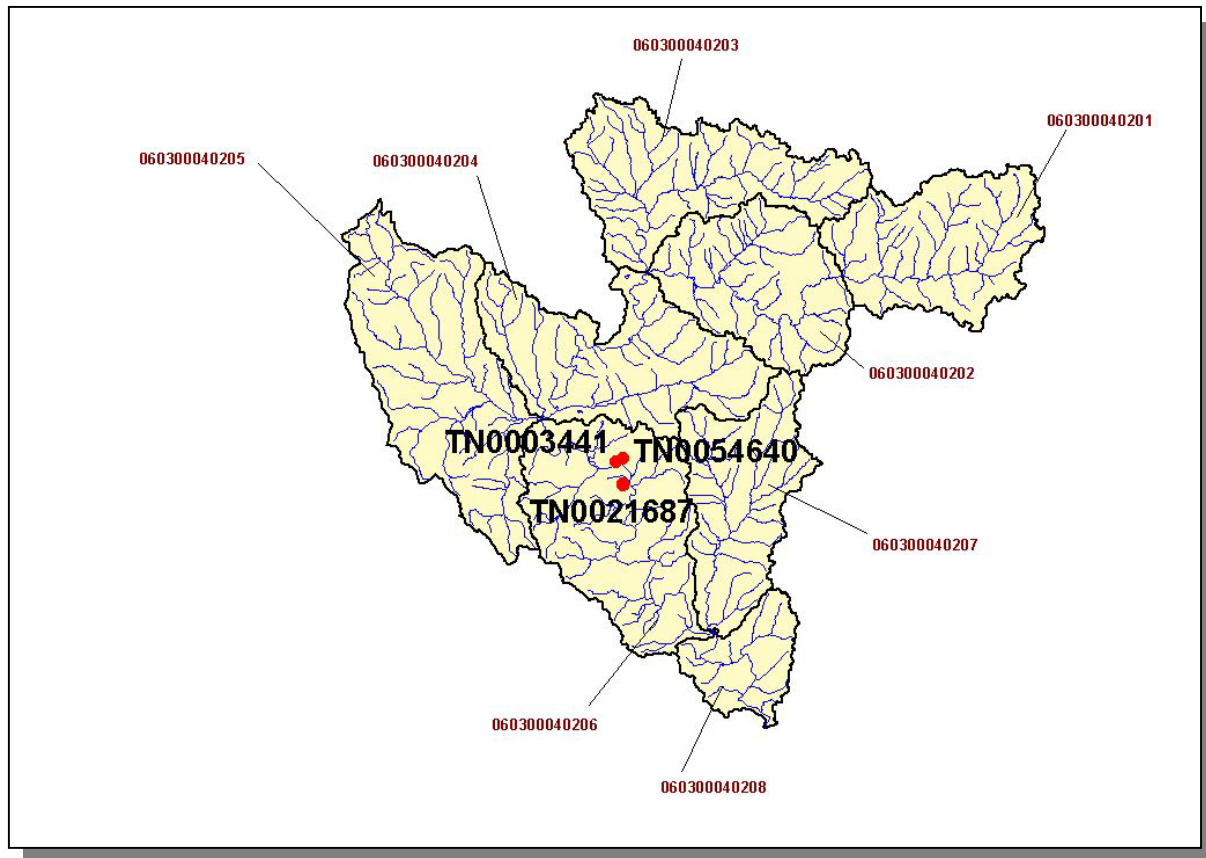


**Figure 4-20. Location of ARAP Sites (Individual Permits) in Subwatershed 0603000402.** Subwatershed 060300040201, 060300040202, 060300040203, 060300040204, 060300040205, 060300040206, 060300040207, and 060300040208 boundaries are shown for reference. More information, including the names of facilities, is provided in Lower Elk-Appendix IV.

**4.2.A.ii.a. Dischargers to Water Bodies Listed on the 1998 303(d) List**

There are two NPDES facilities discharging to water bodies listed on the 1998 303(d) list in Subwatershed 0603000402:

- TN0003441 (Pulaski Rubber Co.) discharges to Richland Creek @ RM 24.5
- TN0021687 (Pulaski STP) discharges to Richland Creek @ RM 23.3
- TN0054640 (TN Valley Recycling) discharges to Richland Creek @ RM 24.1



**Figure 4-21. Location of NPDES Dischargers to Water Bodies Listed on the 1998 303(d) List in Subwatershed 0603000402.** Subwatershed 060300040201, 060300040202, 060300040203, 060300040204, 060300040205, 060300040206, 060300040207, and 060300040208 boundaries are shown for reference. The names of facilities are provided in Lower Elk-Appendix IV.

**DRAFT**

PERMIT #	1Q10	3Q10	7Q10	3Q20	QDESIGN
TN0003441	9.24	9.63	10.08	8.53	0.07200
TN0021687				8.4	4.0
TN0054640	9.24	9.63	10.08	8.53	0.20000

**Table 4-11. Receiving Stream Flow Information for NPDES Dischargers to Waterbodies Listed on the 1998 303(d) List in Subwatershed 0603000402.** Data are in million gallons per day (MGD). Data were obtained from the USGS publication Flow Duration and Low Flows of Tennessee Streams Through 1992 or from permit files.

PERMIT #	CBOD <sub>5</sub>	NH <sub>3</sub>	Cd	Cu
TN0054640	X	X	X	X

**Table 4-12. Monitoring Requirements for NPDES Dischargers to Waterbodies Listed on the 1998 303(d) List in Subwatershed 0603000402.** CBOD<sub>5</sub>, Carbonaceous Biochemical Oxygen Demand (5-Day).

PERMIT #	CBOD <sub>5</sub>	DO	NH <sub>3</sub>	pH	TSS	TRC	PCB	BIO MONITORING	FECAL COLIFORM	OIL and GREASE
TN0021687	X	X	X	x	X	X		X	X	
TN0003441				X						
TN0054640				X	X		X			X

**Table 4-13a. Parameters Monitored for Daily Maximum Limits for NPDES Dischargers to Waterbodies Listed on the 1998 303(d) List in Subwatershed 0603000402.** TSS, Total Suspended Solids; TRC, Total Residual Chlorine; PCB, Polychlorinated Biphenyls.

PERMIT #	Hg	Pb	Zn
TN0054640	X	X	X

**Table 4-13b. Inorganic Parameters Monitored for Daily Maximum Limits for NPDES Dischargers to Waterbodies Listed on the 1998 303(d) List in Subwatershed 0603000402.**

**DRAFT**

**4.2.B.iii. Nonpoint Source Contributions.**

LIVESTOCK (COUNTS)						
Beef Cow	Cattle	Milk Cow	Chickens	Chickens Sold	Hogs	Sheep
24,700	55,512	3,326	75	32	7,269	268

**Table 4-14. Summary of Livestock Count Estimates in Subwatershed 0603000402.** According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older; "Chickens Sold" are all chickens used to produce meat.

County	INVENTORY		REMOVAL RATE	
	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Giles	171.8	171.8	3.3	11.4
Lawrence	199.8	199.8	6.6	27.1
<b>Total</b>	<b>371.6</b>	<b>371.6</b>	<b>9.9</b>	<b>38.5</b>

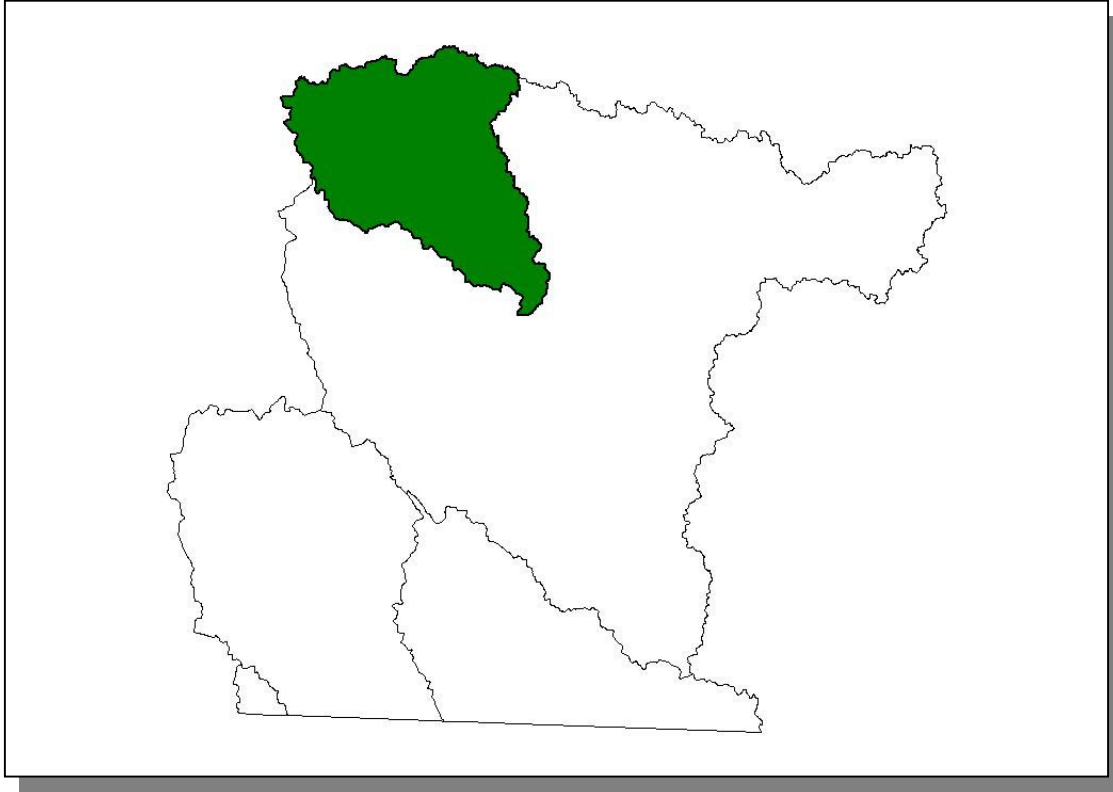
**Table 4-15. Forest Acreage and Average Annual Removal Rates (1987-1994) in Subwatershed 0603000402.**

CROPS	TONS/ACRE/YEAR
Legume/Grass (Hayland)	0.45
Grass (Hayland)	0.23
Legume (Hayland)	0.59
Forest Land (Grazed)	0.00
Forest Land (Not Grazed)	0.00
Corn (Row Crops)	5.00
Soybeans (Row Crops)	4.69
Cotton (Row Crops)	8.07
All Other Row Crops	2.70
Summer Fallow (Other Cropland)	1.60
Wheat (Close Grown Cropland)	3.35
Barley (Close Grown Cropland)	1.08
All Other Close Grown Cropland	1.80
Grass (Pastureland)	0.97
Grass, Forbs, Legumes (Mixed Pasture)	0.74
Other Land in Farms (Other Farmland)	0.05
Conservation Reserve Program Lands	0.25
Other Vegetable and Truck Crops	4.29
All Other Crops not Planted	0.87
Non Agricultural Land Use	0.00
Farmsteads and Ranch Headquarters	0.41

**Table 4-16. Annual Estimated Total Soil Loss in Subwatershed 0603000402.**

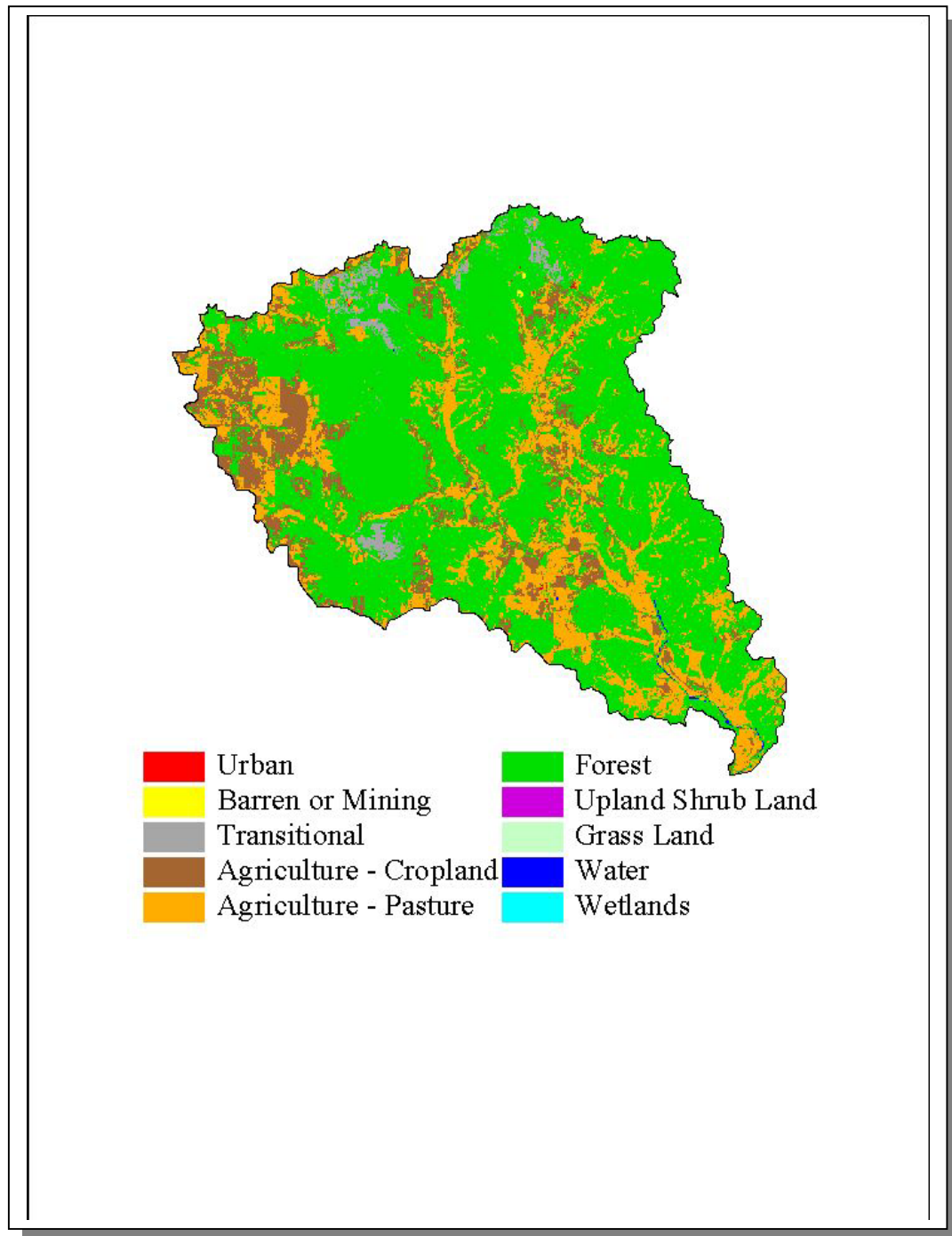


**4.2.C. 0603000403.**



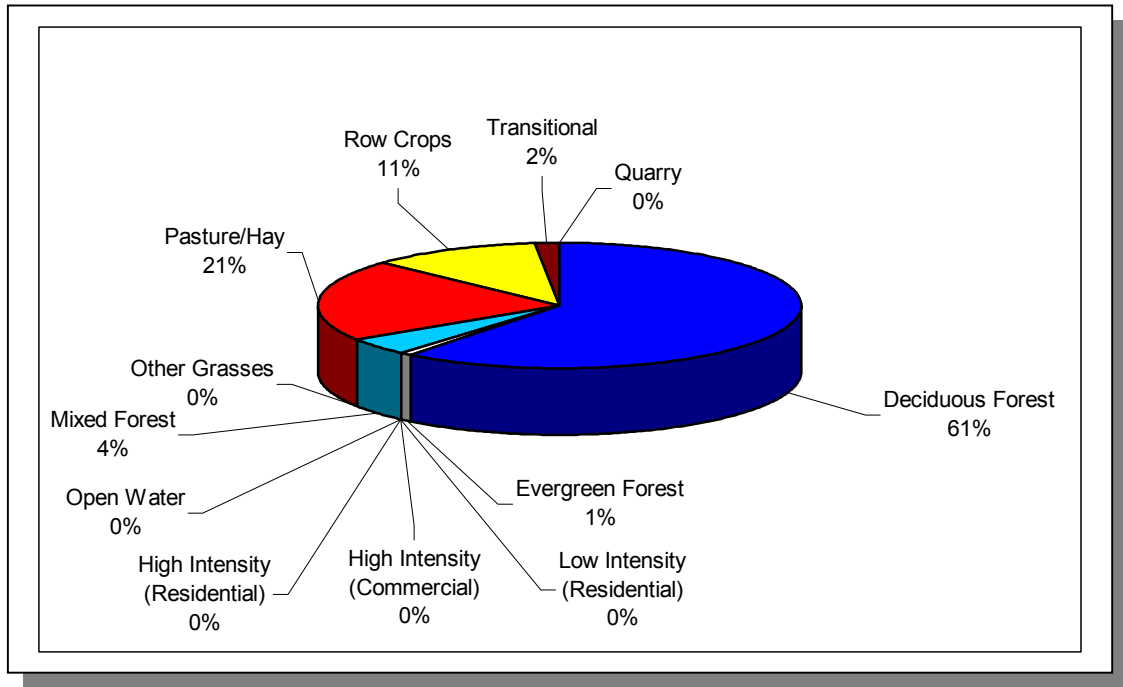
**Figure 4-22. Location of Subwatershed 0603000403.** All Lower Elk HUC-10 subwatershed boundaries are shown for reference.

**4.2.C.i.** General Description.

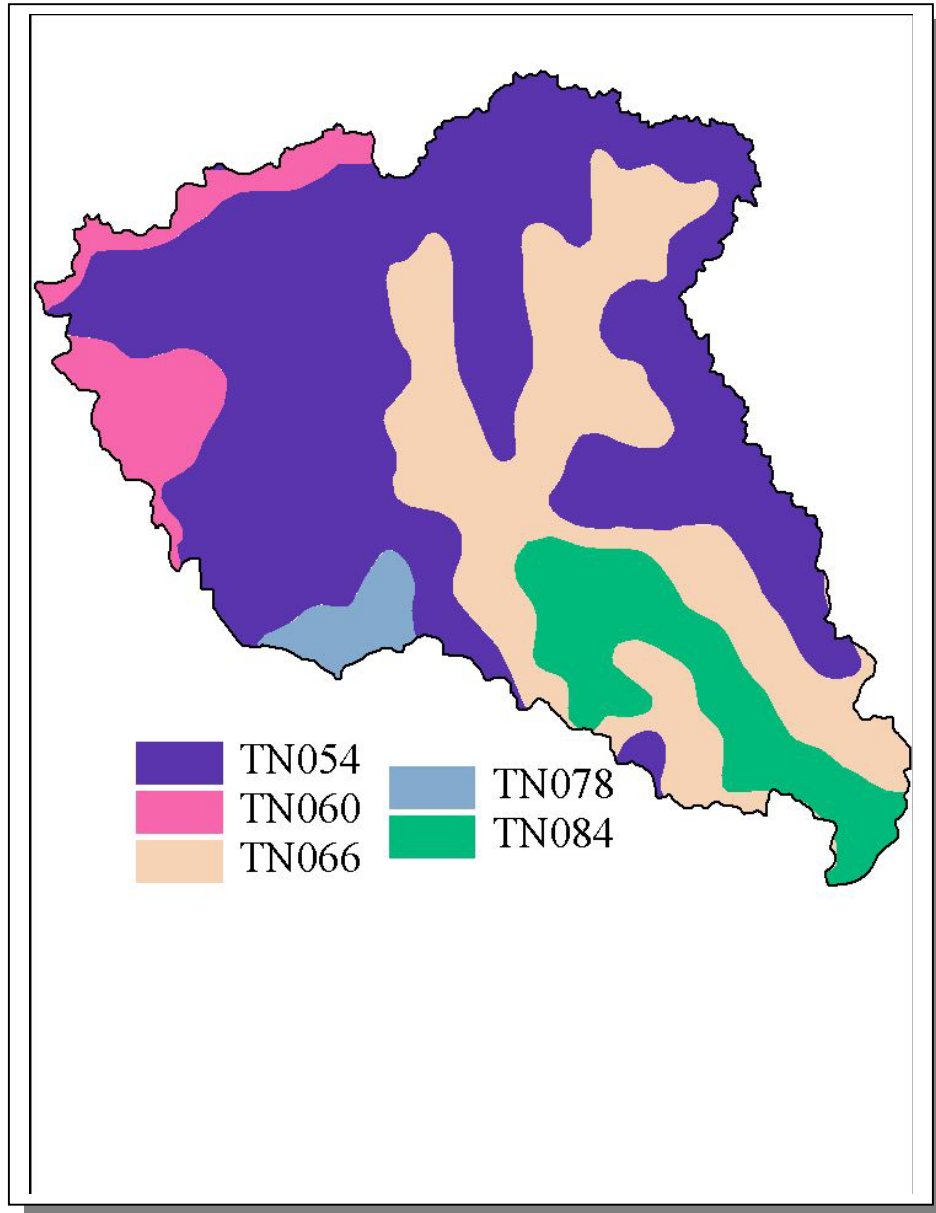


**Figure 4-23. Illustration of Land Use Distribution in Subwatershed 0603000403.**

**DRAFT**



**Figure 4-24. Land Use Distribution in Subwatershed 0603000403.** More information is provided in Lower Elk-Appendix IV.



**Figure 4-25. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 0603000403.**

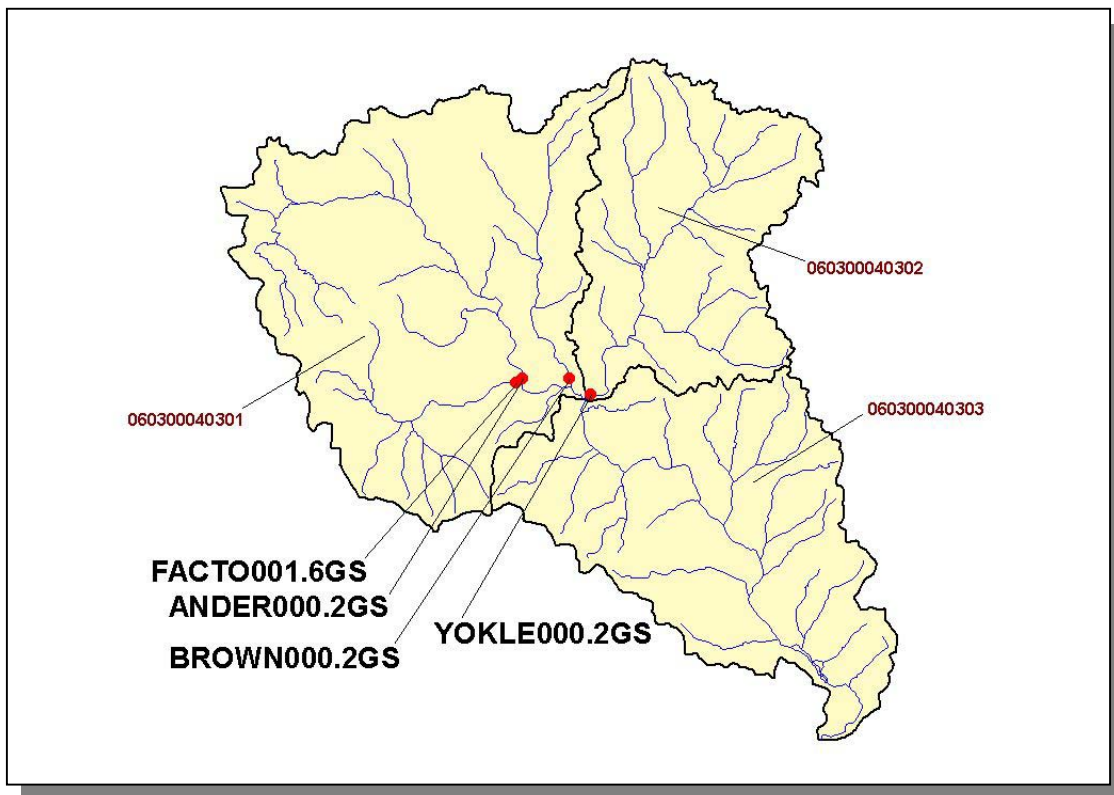
STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN054	0.00	C	3.04	4.84	Loam	0.32
TN060	5.00	B	1.30	5.32	Silty Loam	0.39
TN066	0.00	B	2.62	4.75	Loam	0.28
TN078	5.00	B	1.73	4.96	Silty Loam	0.39
TN084	0.00	C	1.80	4.99	Silty Loam	0.28

**Table 4-17. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 0603000403.** More information is provided in Lower Elk-Appendix IV.

**DRAFT**

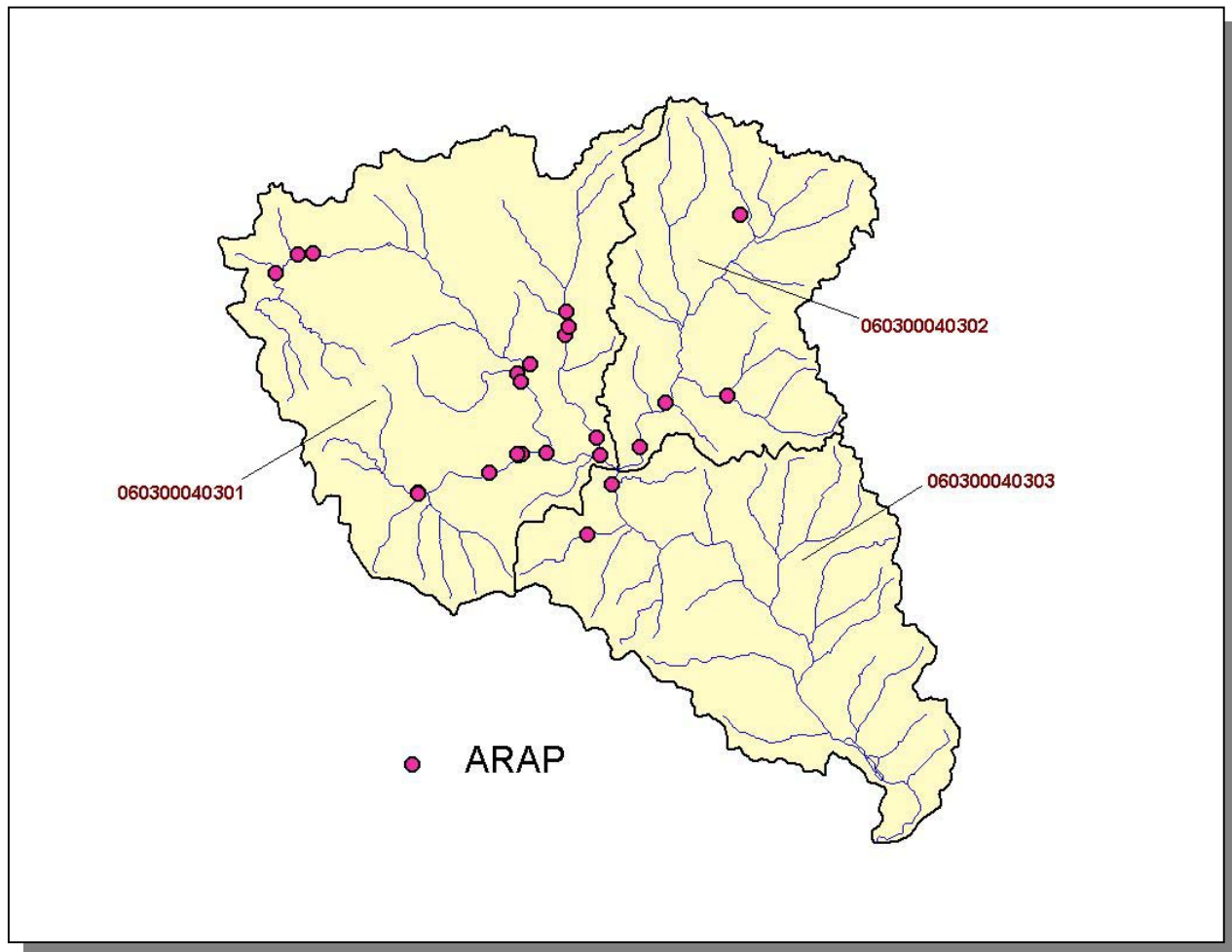
County	COUNTY POPULATION		Portion of Watershed (%)	ESTIMATED POPULATION IN WATERSHED		% CHANGE
	1990	1997 Est.		1990	1997	
Giles	25,741	28,515	11.93	3,072	3,403	10.8
Lawrence	35,303	39,095	2.05	724	802	10.8
Maury	54,812	68,268	0.01	6	7	16.7
<b>Total</b>	<b>115,856</b>	<b>135,878</b>		<b>3,802</b>	<b>4,212</b>	<b>10.8</b>

**Table 4-18. Population Estimates in Subwatershed 0603000403.**



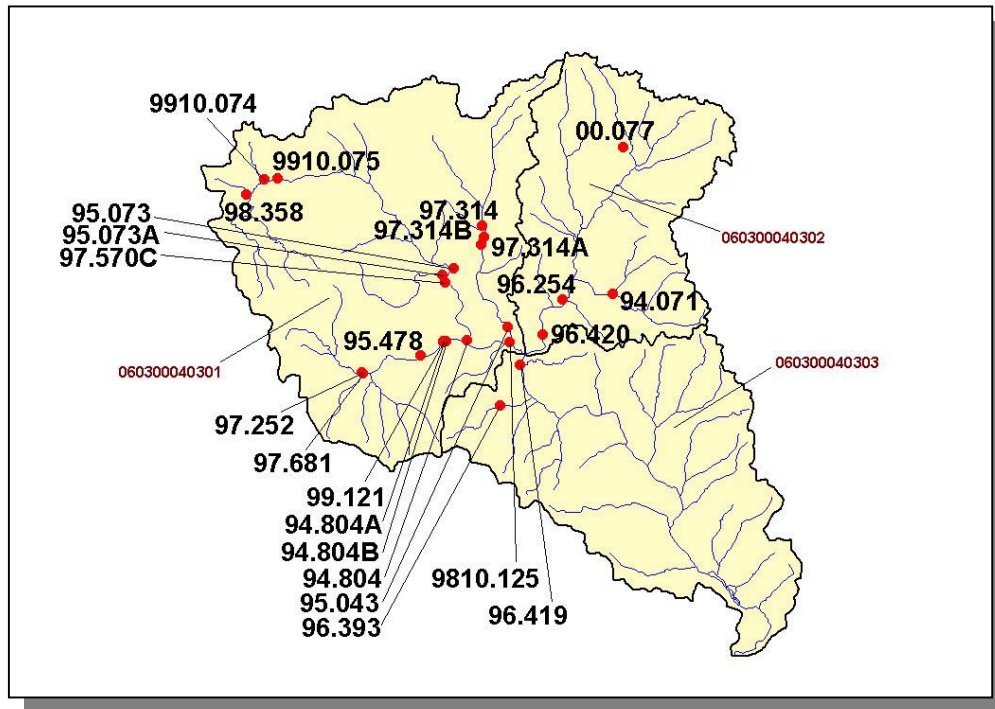
**Figure 4-26. Location of STORET Monitoring Sites in Subwatershed 0603000403.** Subwatershed 060300040301, 060300040302, and 060300040303 boundaries are shown for reference. More information is provided in Lower Elk-Appendix IV.

**4.2.C.ii.** Point Source Contributions.



**Figure 4-27. Location of Active Point Source Facilities in Subwatershed 0603000403.** Subwatershed 060300040301, 060300040302, and 060300040303 boundaries are shown for reference. More information is provided in the following charts.

**DRAFT**



**Figure 4-28. Location of ARAP Sites (Individual Permits) in Subwatershed 0603000403.** Subwatershed 060300040301, 060300040302, and 060300040303 boundaries are shown for reference. More information, including the names of facilities, is provided in Lower Elk-Appendix IV.

**DRAFT**

**4.2.C.iii.** Nonpoint Source Contributions.

<b>LIVESTOCK (COUNTS)</b>						
Beef Cow	Cattle	Milk Cow	Chickens	Chickens Sold	Hogs	Sheep
3,055	6,656	310	9	4	971	30

**Table 4-19. Summary of Livestock Count Estimates in Subwatershed 0603000403.** According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older; "Chickens Sold" are all chickens used to produce meat.

County	<b>INVENTORY</b>		<b>REMOVAL RATE</b>	
	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Giles	171.8	171.8	3.3	11.4
Lawrence	199.8	199.8	6.6	27.1
McNairy	224.4	224.4	7.0	27.2
<b>Totals</b>	<b>596.0</b>	<b>596.0</b>	<b>16.9</b>	<b>65.7</b>

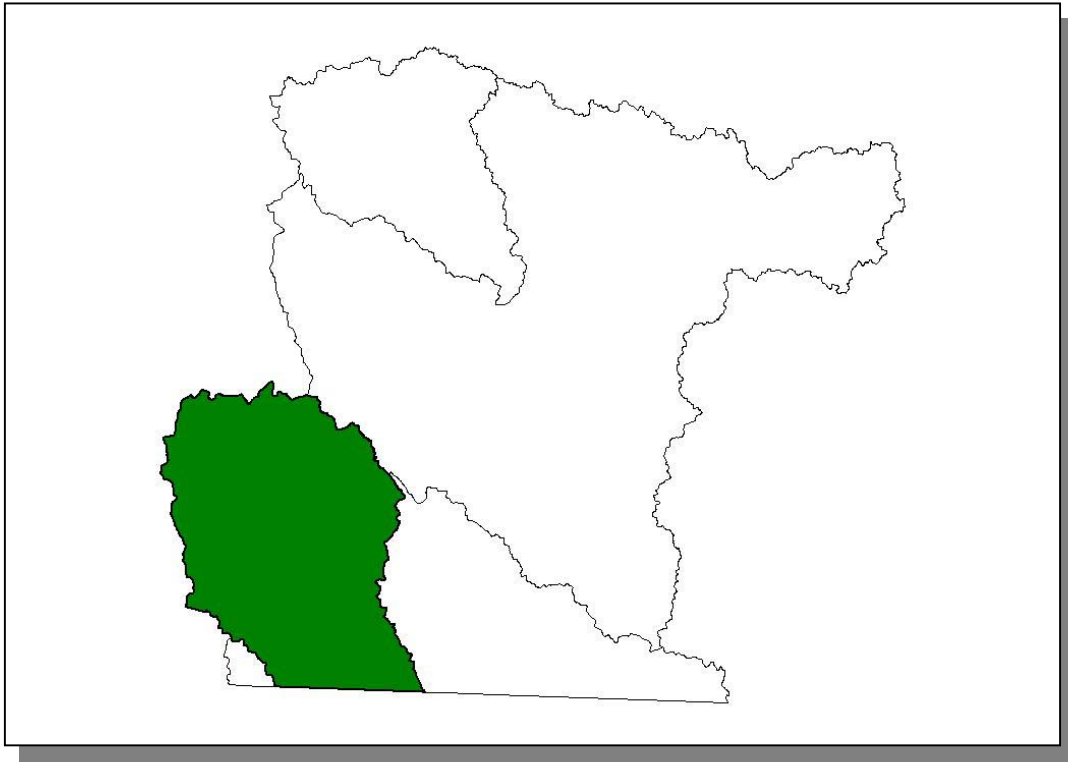
**Table 4-20. Forest Acreage and Average Annual Removal Rates (1987-1994) in Subwatershed 0603000403.**

<b>CROPS</b>	<b>TONS/ACRE/YEAR</b>
Grass (Hayland)	0.21
Legume/Grass (Hayland)	0.18
Grass (Pastureland)	0.93
Grass, Forbs, Legumes (Mixed Pasture)	0.69
Forest Land (Grazed)	0.00
Forest Land (Not Grazed)	0.00
Soybeans (Row Crops)	6.92
Corn (Row Crops)	4.39
Cotton (Row Crops)	8.07
All Other Row Crops	2.71
Wheat (Close Grown Cropland)	3.70
Barley (Close Grown Cropland)	1.08
All Other Close Grown Cropland	1.80
Conservation Reserve Program Land	0.33
Summer Fallow (Other Cropland)	0.35
Other Vegetable and Truck Crops	4.29
Farmsteads and Ranch Headquarters	1.06
Other Cropland not Planted	2.21
Nonagricultural Land Use	0.00

**Table 4-21. Annual Estimated Total Soil Loss in Subwatershed 0603000403.**

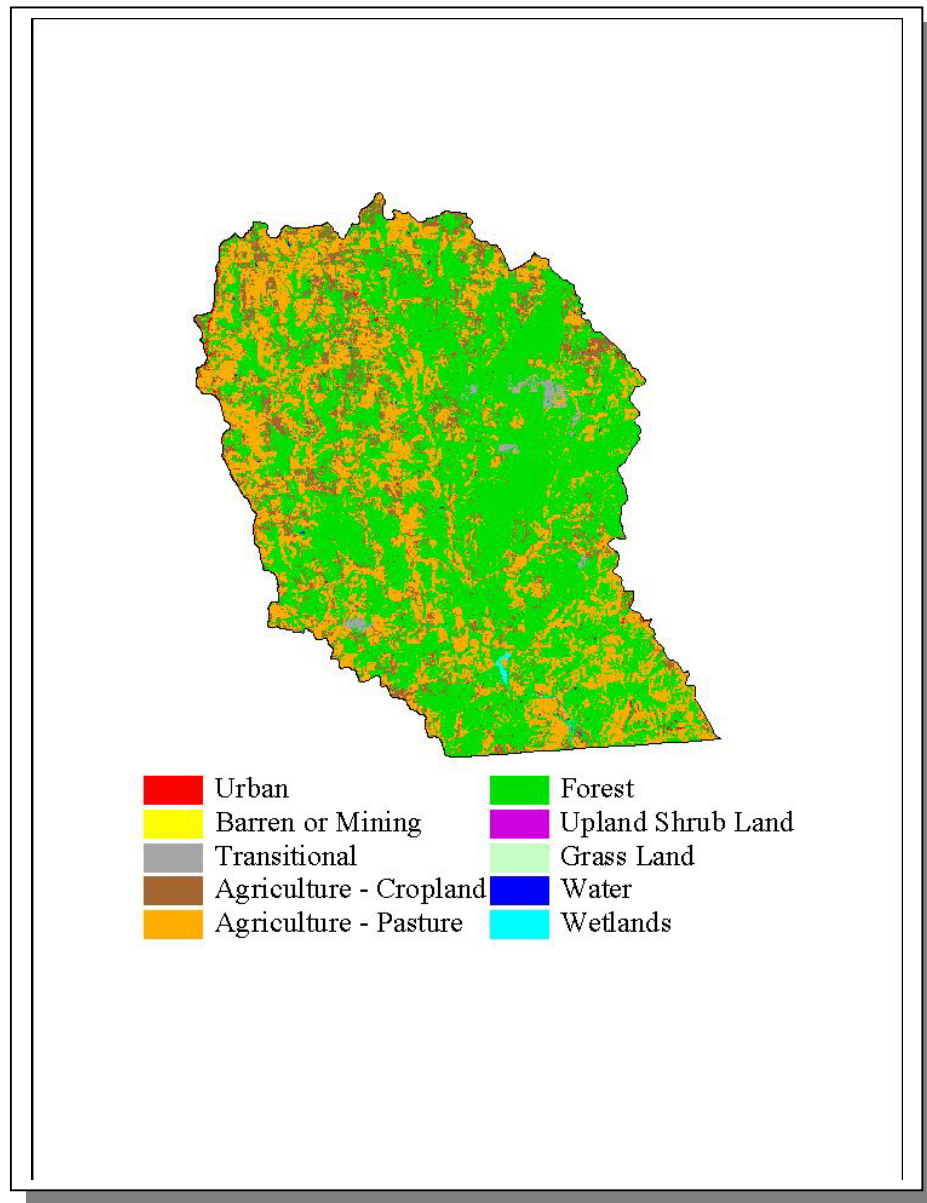


**4.2.D. 0603000404.**



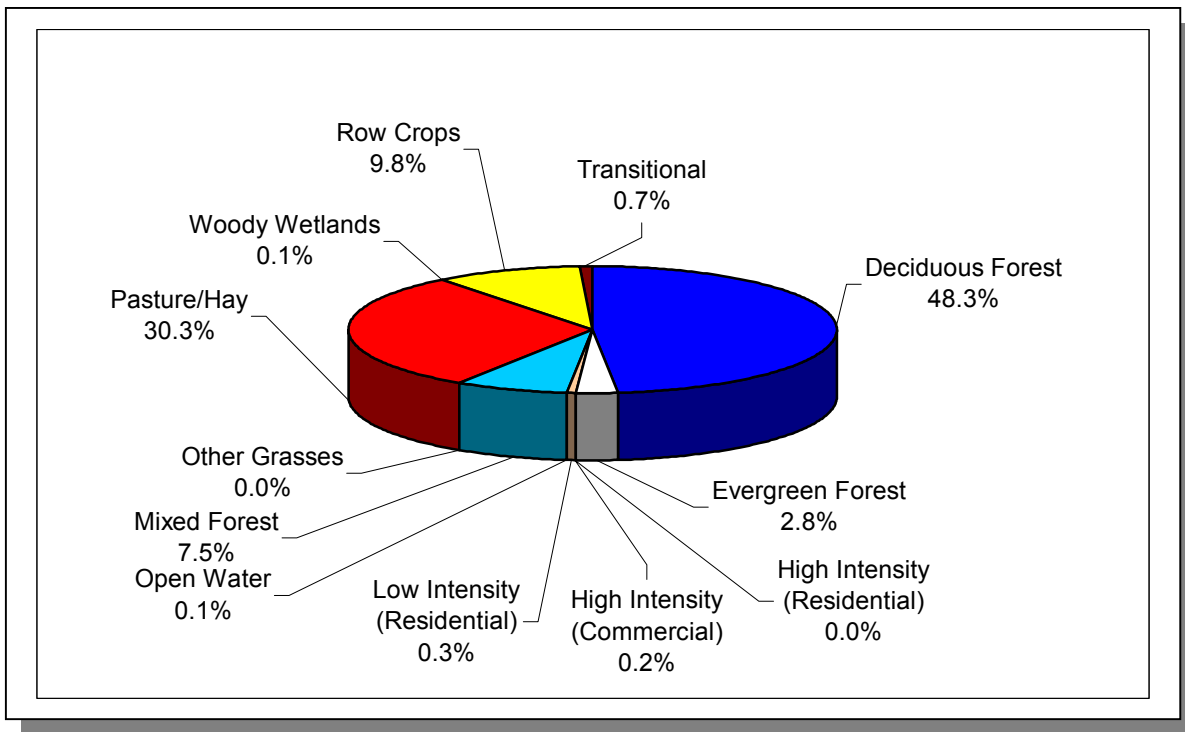
**Figure 4-29. Location of Subwatershed 0603000404.** All Lower Elk HUC-10 subwatershed boundaries in Tennessee are shown for reference.

**4.2.D.i.** General Description.



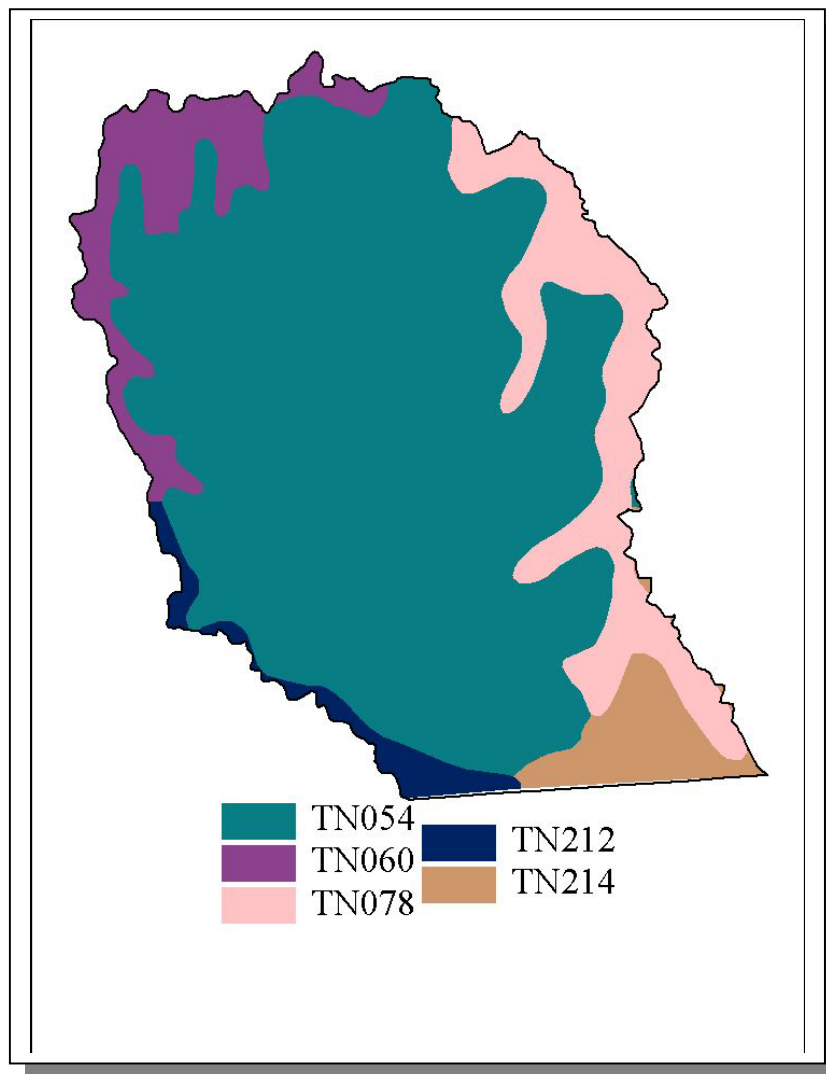
**Figure 4-30. Illustration of Land Use Distribution in Subwatershed 0603000404.**

**DRAFT**



**Figure 4-31. Land Use Distribution in Subwatershed 0603000404.** More information is provided in Lower Elk-Appendix IV.

**DRAFT**



**Figure 4-32. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 0603000404.**

STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN054	0.00	C	3.04	4.84	Loam	0.32
TN060	5.00	B	1.30	5.32	Silty Loam	0.39
TN078	5.00	B	1.73	4.96	Silty Loam	0.39
TN212	4.00	B	1.95	5.04	Silty Loam	0.38
TN214	0.00	B	2.52	4.86	Loam	0.32

**Table 4-22. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 0603000404.** More information is provided in Lower Elk-Appendix IV.

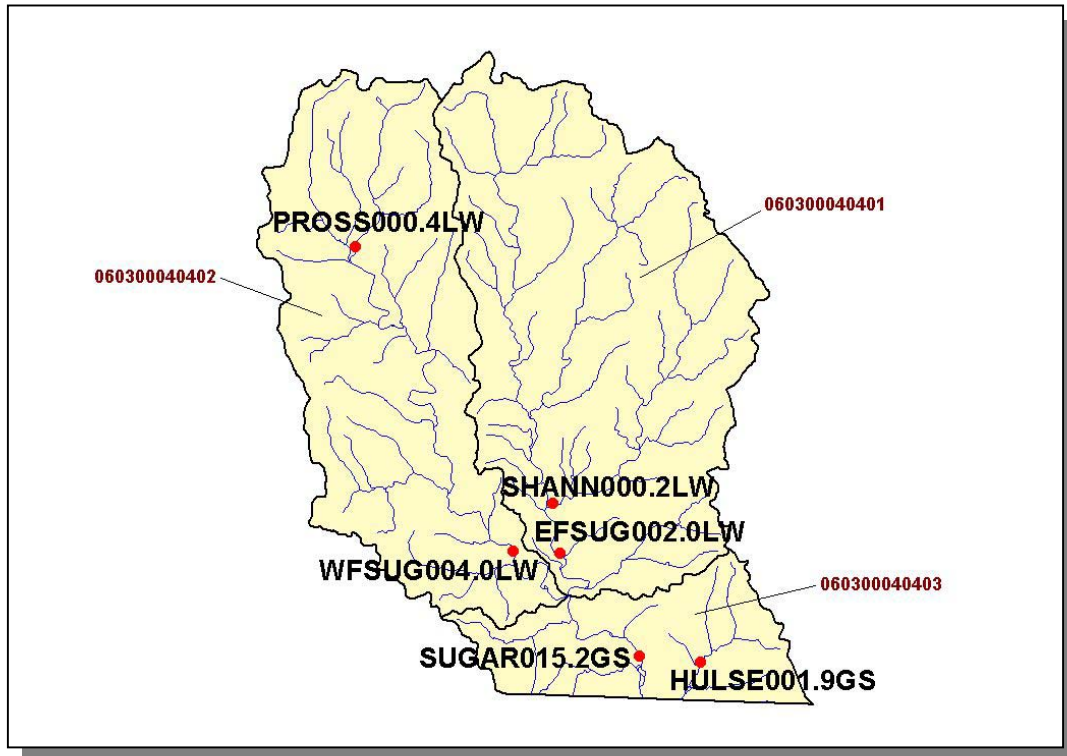
**DRAFT**

County	COUNTY POPULATION		Portion of Watershed (%)	ESTIMATED POPULATION IN WATERSHED		PERCENT CHANGE
	1990	1997 Est.		1990	1997	
Giles	25,741	28,515	6.84	1,760	1,950	10.8
Lawrence	35,303	39,095	13.74	4,852	5,373	10.7
Total	61,044	67,610		6,612	7,323	10.8

**Table 4-23. Population Estimates in Subwatershed 0603000404.**

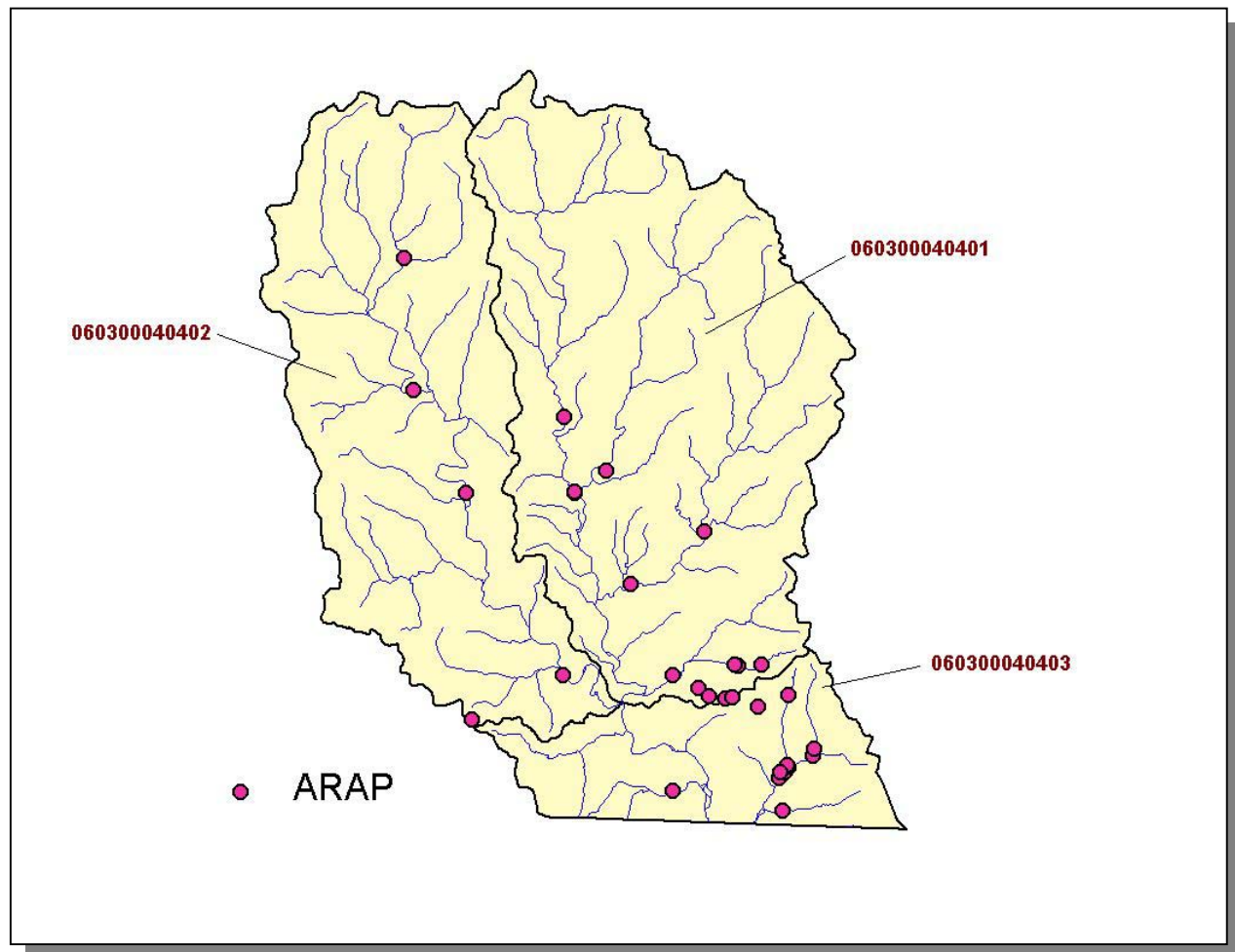
			NUMBER OF HOUSING UNITS			
Populated Place	County	Population	Total	Public Sewer	Septic Tank	Other
Minor Hill	Giles	351	186	2	182	2

**Table 4-24. Housing and Sewage Disposal Practices of Select Communities in Subwatershed 0603000404.**



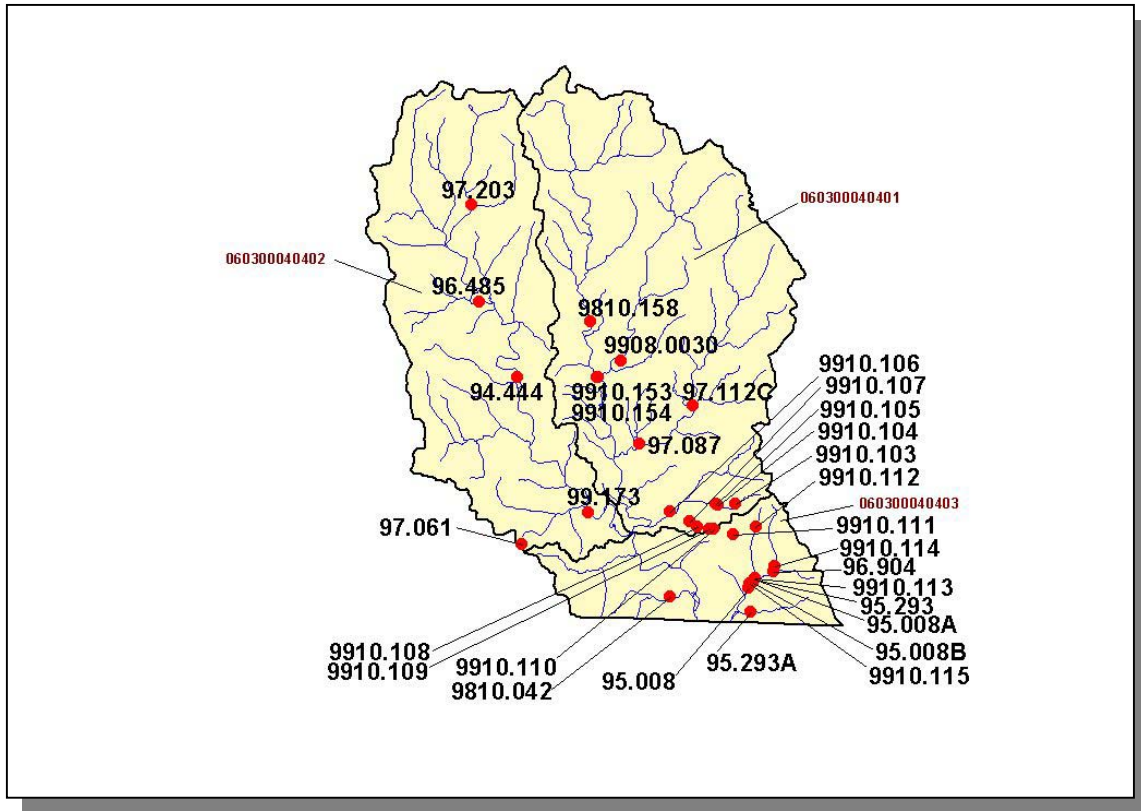
**Figure 4-33. Location of STORET Monitoring Sites in Subwatershed 0603000404.** Subwatershed 060300040401, 060300040402, and 060300040403 boundaries are shown for reference. More information is provided in Lower Elk-Appendix IV.

**4.2.D.ii.** Point Source Contributions.



**Figure 4-34. Location of Active Point Source Facilities in Subwatershed 0603000404.** Subwatershed 060300040401, 060300040402, and 060300040403 boundaries are shown for reference. More information is provided in the following charts.

**DRAFT**



**Figure 4-35. Location of ARAP Sites (Individual Permits) in Subwatershed 0603000404.** Subwatershed 060300040401, 060300040402, and 060300040403 boundaries are shown for reference. More information is provided in Lower Elk-Appendix IV.



**DRAFT**

**4.2.D.iii.** Nonpoint Source Contributions.

LIVESTOCK (COUNTS)						
Beef Cow	Milk Cow	Cattle	Chickens	Chickens Sold	Hogs	Sheep
8,330	904	16,724	25	68,050	2,511	69

Table 4-25. Summary of Livestock Count Estimates in Subwatershed 0603000404. According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older; "Chickens Sold" are all chickens used to produce meat.

County	INVENTORY		REMOVAL RATE	
	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Giles	171.8	171.8	3.3	11.4
Lawrence	199.8	199.8	6.6	27.1
<b>Total</b>	<b>371.6</b>	<b>371.6</b>	<b>9.9</b>	<b>38.5</b>

**Table 4-26. Forest Acreage and Average Annual Removal Rates (1987-1994) in Subwatershed 0603000404.**

CROPS	TONS/ACRE/YEAR
Forest Land (Grazed)	0.00
Forest Land (Not Grazed)	0.00
Corn (Row Crops)	5.01
Soybeans (Row Crops)	20.33
Cotton (Row Crops)	8.07
All Other Row Crops	2.70
Wheat (Close Grown Cropland)	10.09
Barley (Close Grown Cropland)	1.08
All Other Close Grown Cropland	1.80
Grass (Hayland)	0.20
Legume/Grass (Hayland)	0.46
Grass (Pastureland)	0.51
Grass, Forbs, Legumes (Mixed Pasture)	0.34
Conservation Reserve Program Land	0.68
Other Vegetable and Truck Crops	4.29
Summer Fallow (Other Cropland)	0.35
Other Cropland not Planted	9.14
Farmsteads and Ranch Headquarters	4.37
Non Agricultural Land Use	0.00

**Table 4-27. Annual Soil Loss in Subwatershed 0603000404.**